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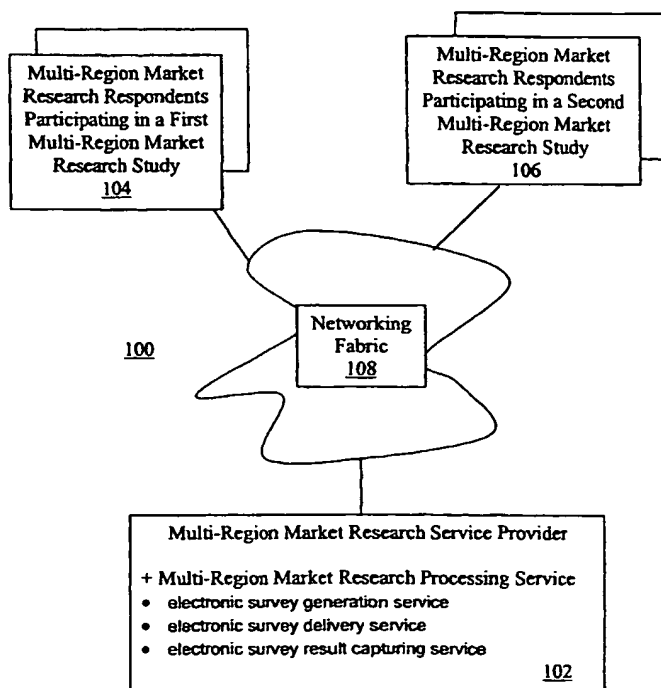
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(54) Title: MULTI-REGION MARKET RESEARCH STUDY PROCESSING



(57) Abstract: An electronic survey engine is provided with a number of support functions to support electronic survey processing and content delivery in a preferred language selected from a large number of supported languages. In one embodiment, the support functions include a function for identifying an electronic survey involving a product concept, a function for generating a price for the product concept based at least in part upon pricing constraints, and a function for storing the generated price for the product concept in association with the identified electronic survey and in association with the respondent participating in the electronic survey. In another embodiment, the support functions include a function for retrieving from a data store, a plurality of electronic survey questions composed according to a first language, a function for displaying in a preferred language identified by a respondent, a select one of the plurality of electronic survey questions, a function for receiving from the respondent, a response to the select one of the plurality of electronic survey questions, and a function for validating the response to the select one of the plurality of electronic survey questions based at least in part upon one or more response criteria associated with the first of the plurality of electronic survey questions.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Multi-Region Market Research Study ProcessingRelated Application

This application claims priority to U.S. Provisional Application number 60/164,585, entitled "System and Method for Obtaining and Collating Survey Information In Real Time For Multiple Languages and Multiple Character Encodings", filed on November 10, 1999, which is hereby fully incorporated by reference.

BACKGROUND OF THE INVENTION**1. Field of the Invention**

The present invention relates to the field of data processing. More specifically, the present invention relates to the conducting of multi-region market research studies.

2. Background Information

With increased globalization of commerce, market researchers increasingly have to conduct market research that involves multiple geographic regions of the globe. Creating, conducting, collecting data, analyzing data and reporting on such a market research study present a number of challenges that otherwise do not exist in the case of a single region market research study. Multi-region studies necessarily involve panelists (also referred to as participants, respondents, interviewees, study subjects, and so forth) that are dispersed in various geographic locations, with language differences, cultural differences, price point sensitive differences and so forth shared between them.

Historically, market researchers would develop a study for a first region, e.g. an English-speaking region, and then work with local counterparts in the various other regions to have the study translated, and conducted. Under the prior art, it was often difficult to coordinate the conducting, or processing of such surveys including the tasks of survey generation and delivery, as well as ensuring the data collected are consistent, and compatible for consolidation, analysis and reporting.

Thus, an improved approach to the generation and delivery of surveys, as well as data collection, analysis and reporting is desired.

SUMMARY OF THE INVENTION

An electronic survey engine is provided with a number of support functions to support electronic survey processing and content delivery in a preferred language selected from a large number of supported languages. In one embodiment, the support functions include a function for identifying an electronic survey involving a product concept, a function for generating a price for the product concept based at least in part upon pricing constraints, and a function for storing the generated price for the product concept in association with the identified electronic survey and in association with the respondent participating in the electronic survey.

In another embodiment, the support functions include a function for retrieving from a data store, a plurality of electronic survey questions composed according to a first language, a function for displaying in a preferred language identified by a respondent, a select one of the plurality of electronic survey questions, a function for receiving from the respondent, a response to the select one of the plurality of electronic survey questions, and a function for validating the response to the select one of the plurality of electronic survey questions based at least in part upon one or more response criteria associated with the first of the plurality of electronic survey questions.

BRIEF DESCRIPTION OF DRAWINGS

The present invention will be described by way of exemplary embodiments, but not limitations, illustrated in the accompanying drawings in which like references denote similar elements, and in which:

Figure 1 illustrates an overview of the present invention, including the multi-region market research processing service of the present invention, in accordance with one embodiment;

Figure 2 illustrates one embodiment of a multi-region market research service provider including an electronic survey engine of the present invention;

Figure 3 illustrates the operational flow of the relevant aspects of the electronic survey engine of **Figure 2** including main module **220** for generating and delivering electronic surveys in accordance with one embodiment of the present invention;

Figure 4 is a graphical illustration of a semantic differential question in accordance with one embodiment of the invention;

Figure 5 illustrates the operational flow of for displaying concept-specific marketing information in accordance with one embodiment of the invention;

Figure 6 is a graphic illustration of a marketing concept including differently formatted sections;

Figures 7(A-C) illustrate various operational flows for determining a price point in accordance with one embodiment of the invention;

Figure 8 illustrates an operational flow for administering an electronic on-line CDA;

Figures 9A and 9B illustrate an exemplary operational flow of a result capturing process in accordance with one embodiment of the invention;

Figure 10 illustrates an example computer system suitable for use to practice the present invention, in accordance with one embodiment;

Figure 11 illustrated an example of preferred language based content dynamically constructed in accordance with one embodiment of the present invention;

Figure 12 illustrates the operational flow of the relevant aspects of content delivery engine including the main module of **Fig. 2** for delivering content in a preferred language basis in accordance with one embodiment of the invention;

Figure 13 is a graphical illustration of a screen for providing search criteria for use in selecting panelists in accordance with one embodiment of the invention;

Figure 14 is a graphical illustration of a summary page displaying a list of panelists meeting specified search criteria in accordance with one embodiment of the invention; and

Figure 15 is a graphical illustration of a panelist details page in accordance with one embodiment of the invention.

DETAILED DESCRIPTION OF THE INVENTION

In the following description, various aspects of the present invention will be described. However, it will be apparent to those skilled in the art that the present invention may be practiced with only some or all aspects of the present invention. For purposes of explanation, specific numbers, materials and configurations are set forth in order to provide a thorough understanding of the present invention. However, it will also be apparent to one skilled in the art that the present invention may be practiced without the specific details. In other instances, well-known features are omitted or simplified in order not to obscure the present invention.

Parts of the description will be presented in terms of operations performed by a processor based device, using terms such as data, tables, requesting, determining, retrieving, displaying, and the like, consistent with the manner commonly employed by those skilled in the art to convey the substance of their work to others skilled in the art. As well understood by those skilled in the art, the quantities take the form of electrical, magnetic, or optical signals capable of being stored, transferred, combined, and otherwise manipulated through mechanical and electrical components of the processor based device; and the term processor include microprocessors, micro-controllers, digital signal processors, and the like, that are standalone, adjunct or embedded.

Various operations will be described as multiple discrete steps in turn, in a manner that is most helpful in understanding the present invention, however, the order of description should not be construed as to imply that these operations are necessarily order dependent. In particular, these operations need not be performed in the order of presentation. Further, the description repeatedly uses the phrase "in one embodiment", which ordinarily does not refer to the same embodiment, although it may.

Overview

Referring first to **Figure 1**, a block diagram illustrating an overview of the present invention, in accordance with one embodiment, is shown. As illustrated, multi-region market research service provider **102** (hereinafter "service provider") is advantageously provided with the multi-region market research processing service of the present invention. As will be described in further detail below, the multi-region market research processing service (hereinafter simply "study processing service") includes a number of novel services including, electronic survey generation, delivery and result capturing services. In particular, the study processing service provides dynamic generation of electronic surveys based on a preferred language of the participant, determination and inclusion of geography sensitive price points, concept specific text and graphic formatting, and response recordation services as described further herein.

As shown, the computing equipment of multi-region market research respondents **104** and **106** (hereinafter simply respondents **104** and **106**), are coupled to each other as well as the computing equipment of service provider **102** via networking fabric **108**. In accordance with one embodiment of the invention, service provider **102** generates and distributes one or more language specific electronic surveys to one or more of respondents **104** and **106** via networking fabric **108**. In turn, respondents **104** and **106** complete the electronic survey(s) by entering the data and returning (i.e. submitting) the electronic survey(s) back to service provider **102** also via networking fabric **108**. In one embodiment, the electronic surveys of the present invention are distributed to respondents **104** in the form of a single markup language encoded page. In an alternative embodiment, service provider **102** may facilitate administration of the electronic survey(s) whereby service provider **102** enters the data remotely for a respondent. For example, service provider **102** may act as an intermediary or translator who enters a respondent's answers to an electronic survey in lieu of the respondent directly entering the data. It should be noted that service provider **102** may be a "single" entity or an

"alliance" of affiliated entities. In other embodiments, third parties other than service provider **102** may also act as intermediaries for the respondent.

Except for the novel services incorporated within the study processing service of service provider **102**, the various equipment used by service provider **102**, and respondents **104** and **106**, as well as networking fabric **108** are intended to represent a broad range of these elements known in art. Examples of computing and networking equipment suitable for practicing the present invention include but are not limited to various palm-sized, notebook size, or desktop computers, as well as set-top boxes, servers, routers/switches, personal digital assistants, wireless telephones utilizing i-Mode and/or wireless access protocols (WAP) and so forth. The functions and constitutions of these elements are known, accordingly will not be further described.

In various embodiments, networking environment **100** including service provider **102** and respondents **104** and **106** are employed to create, conduct, collect, analyze and report on consumer/marketing research/surveys in a large number of languages. In particular, in one embodiment, network environment **100** is employed to create surveys as described in co-pending U.S. Patent Application, <number to be assigned>, entitled Multi-Region Market Research Study Creation, filed contemporaneously, and having common inventorship with the present invention. In yet another embodiment, network environment **100** is employed to analyze and report on survey results as described in co-pending U.S. Patent Application, <number to be assigned>, entitled Reporting and Analyzing Data From a Multi-Region Research Survey, filed contemporaneously, and having common inventorship with the present invention. These co-pending applications are all hereby fully incorporated by reference.

Generating an Electronic Survey

Referring now to **Figure 2**, a diagram illustrating one embodiment of service provider **102** of the present invention is shown. As illustrated, service provider **102** is advantageously equipped with one or more databases **212** having stored therein a variety of support data, and electronic survey engine

210 to generate and deliver the electronic surveys to client devices, e.g. respondents **104** and **106**, as part of a larger research study.

Electronic survey engine **210** dynamically generates electronic surveys utilizing language specific content elements such as questions, response options, and display text and graphics, and delivers such electronic surveys to one or more client devices in a preferred language indicated by each respondent. In accordance with one embodiment of the invention, electronic survey engine **210** dynamically generates a geographically adjusted price point for the product concept(s) of each study based upon established pricing criteria such as maximum and minimum price constraints. In one embodiment of the invention, prices for the product concepts of the various studies are randomly generated specifically for each respondent upon that particular respondent being invited to participate in the survey. Accordingly, upon each successive access (including e.g., a web page refresh) by the respondent to a particular electronic survey, the same previously generated price will appear every time the same product concept being surveyed is displayed to the respondent. In accordance with the present invention, support data stored in databases **212** are expressed in a variety of supported languages and include survey questions, valid response options for each survey question, client identifiers, price constraints and conversion rates, as well as textual messages and graphics/images specifically designed for the various supported languages. Electronic survey engine **210** further includes a main module **220** incorporating the teachings of the present invention and supported by a number of support functions **222** to be discussed in further detail below.

Figure 2a is a diagram illustrating another embodiment of service provider **102** of the present invention. In **Figure 2a**, service provider **102** is further equipped with content delivery engine **210a** to deliver contents to respondents **104** and **106**, based on each respondent's preferred language. In one embodiment, content delivery engine **210a** is equipped to deliver electronic surveys of the present invention to one or more respondents. The content delivery engine **210a** dynamically constructs the preferred language based contents to be delivered using the language specific content elements stored in

databases **212a** for example. More specifically, content elements stored in databases **212a** include graphics/images specifically designed for the various supported languages, textual message and pick list elements as well as static content pages expressed in the supported languages; and the content delivery engine also includes a main module (i.e. **220a**) incorporated with the teachings of the present invention, and supported by a number of support functions **222a** including in particular, a Create_Header function, a Get_Message function, and a Get_PickList Function to dynamically construct the required contents. As a result, content delivery engine **210a** may deliver content based on a respondent's preferred language for a large number of languages. In one embodiment, service provider **102** delivers dynamically constructed contents to respondents, based on a respondent's preferred language, supporting as many as 33 languages at the same time, a significantly higher number than any known prior art systems using prior art techniques. From the description to follow, those skilled in the art would appreciate that the present invention is highly scalable, and may easily be extended to support even more languages at the same time. In fact, there is no theoretical limit to the number of languages that can be currently supported by the present invention, as long as the necessary storage, computing resources, and communication bandwidth are available.

Preferred Language Based Content

Referring ahead to **Figure 11**, an example of preferred language based content dynamically constructed in accordance with one embodiment of the present invention is illustrated. As illustrated, if included, graphics/images **1112** of preferred language based content **1110** are dynamically constructed from graphics/images specifically designed for the various languages. That is, different graphics/images sensitive to the culture and community standards of the various communities speaking the supported languages are provided for the different languages. Further, if included, textual contents **1114** of preferred language based content **1110** are dynamically constructed from message elements expressed in the supported languages. That is, the contents are

constructed from individual translated messages expressed in the supported languages.

Moreover, if included, links **1116** are generated in the preferred language. That is secondary contents are accessed with resource location names expressed in the supported languages. Similarly, if included, pick lists **1118** are ordered in view of the preferred language, and static pages **1124** of pop-ups **1122** are expressed in the preferred language. That is, pick list elements are ordered depending on whether the preferred language is an alphabet based or a character based language, and the options are ordered in accordance with the manner the language customarily order items, e.g. alphabetically for English, by character strokes for Kanji (Japanese), and so forth.

Further, display space efficient drop-down list **1120** (as opposed to the prior art display space inefficient button/icon approach) is advantageously employed to facilitate a respondent in changing the preferred language.

Finally, if included, pop-up static pages **1124** are also generated in the preferred language. That is, different pop-up static pages expressed in the corresponding supported languages are employed for different preferred languages.

Operational Flow of Content Delivery Engine

Figure 12 illustrates the operational flow of the relevant aspects of content delivery engine including the main module of **Fig. 2** for delivering content in a preferred language basis. As illustrated, at block **1202** main **220** (using e.g. in-line instructions) sets one of the supported languages as the default language. In one embodiment, the default language is English. In other embodiments, the default language is the last language selected by the respondent as the preferred language. Various approaches known in the art may be employed to allow main **220** to remember the preferred language of a respondent across sessions.

At block **1204**, main **220** sets the character code setting to the required character code set based on the preferred language. For the illustrated

embodiment, main 220 sets the character code setting using the Create_Header support function. More specifically, in an embodiment, where the contents are encoded using the Hypertext Markup Language (HTML), main 220, using Create_Header function, sets the character code setting by generating a meta statement for the HTML header, specifying the required character code set.

Thereafter, at block 1206, if applicable, main 220 generates the graphics/images of the preferred language content, by retrieving appropriate ones of the stored graphics/images, which as described earlier, are specifically designed for the supported languages. For the illustrated embodiment, the different graphics/images are differentiated employing a graphic/image identification convention that includes the target language. Main 220 constructs the preferred language dependent graphic/image identifier to retrieve the appropriate ones of the graphics/images.

At block 1208, if applicable, main 220 generates the textual contents of the preferred language content, by retrieving appropriate ones of the stored message elements, which as described earlier, are expressed in the supported languages. For the illustrated embodiment, main 220 retrieves the appropriate ones of the message elements, using the Get_Message function.

At block 1210, if applicable, main 220 generates the links in the preferred language, by retrieving the appropriate language specific portion of the resource location names from databases 212, and combining them with the non-language specific portions to form the preferred language tailored links. For the illustrated embodiment, main 220 also retrieves the appropriate ones of the language specific portions of the resource location names, using the Get_Message function.

At block 1212, if applicable, main 220 generates the pick lists, by retrieving the pick list elements from databases 212, and ordering the retrieved pick list elements in accordance with the preferred language's ordering convention. For the illustrated embodiment, main 220 retrieves the appropriate ones of the pick list elements, and order them, using the Get_List function.

At block **1214**, main **220** generates the drop down language selection list to facilitate a respondent in changing the preferred language.

Thereafter, main **220** awaits for respondent interactions with the content displayed, block **1216**. Upon receipt of respondent inputs, main **220** determines if the inputs are associated with the respondent selecting one of the languages listed on the drop down language selection list to change the preferred language, block **1218**. If it is determined that the respondent is changing the preferred language, main **220** returns to block **1204**, re-performs the earlier described operations illustrated by blocks **1204-1218**. If it is determined that the respondent is not changing the preferred language, the inputs are processed and handled in an application dependent manner, as in the prior art.

Accordingly, main **220**, augmented by support functions **222**, is able to dynamically generate contents based on a respondent's preferred language, supporting a large number of languages at the same time. These operations, and other related topics, are further discussed in co-pending U.S. Patent Application, <number to be assigned>, entitled Content Delivery In A Preferred Language For A Large Number Of Languages, filed contemporaneously, and having common inventorship with the present invention.

Operational Flow of Electronic Survey Engine

Figure 3 illustrates the operational flow of the relevant aspects of the electronic survey engine of **Figure 2** including main module **220** for generating and delivering electronic surveys in accordance with one embodiment of the present invention. In one embodiment, electronic survey engine **210** generates and delivers electronic surveys utilizing markup languages such as hypertext markup language (HTML), extended markup language (XML), standard generalized markup language (SGML) and so forth, and/or scripting languages such as JavaScript and Pearl, for example.

In **Figure 3**, it is assumed that the respondent has indicated a particular electronic survey by selecting the electronic survey from e.g., a pick list or by entering the electronic study number directly into a web page, for example.

Other similar methods for indicating an electronic survey may also be utilized.

As illustrated, at block 302, relevant characteristics for each question of the indicated survey are retrieved from e.g. databases 212. In one embodiment, such characteristics include an identification number (i.e. question ID) for each question, a sequence number indicating each question's relative order in the electronic survey, and a response required characteristic indicating which (if any) individual questions require a response. In one embodiment, this and other data are stored in, and retrieved from one or more tables or equivalent data structures within databases 212. At block 304, each question including its title, text and valid response options are retrieved from databases 212. The retrieval may be accomplished using the following query instruction:

```
"SELECT question_title, question_text, question_type, question_text,
      valid_response, etc.
FROM question_base
WHERE question_id=$question_id[$j] AND language
      ='$lang'"
```

At block 306 a determination is made as to whether a translation is available for the question. If the query (shown above) retrieves only one or no results, it is an indication that the question is only available in a default language (i.e., English) and that question is therefore selected, block 310. If, however, the query results indicate that one or more translations of the question are available, the routine attempts to retrieve the appropriate question translation corresponding to the respondent's preferred language as indicated by e.g., the \$lang variable, block 308.

Next, at block 312, the selected question and its valid response options are displayed according to the type of question it is. For example, if the question is a free-form text (FFT) question type, the question is displayed in a first manner (e.g., print qq(<center><TEXTAREA name = "f\$question_id[\$j]" cols="60" rows="5"></TEXTAREA> </center></td></tr>); print "\n";), whereas if the question is a multiple choice question type (MCM or MCS) or a semantic

differential (SDI) question type, the respective questions may be formatted differently.

As described herein, an MCM question type generally allows a respondent to select multiple or no answers, whereas an MCS question type generally allows a respondent to select only a single response. In one embodiment, MCM question types are implemented via checkbox form elements, whereas MCS question types are implemented via radio button form elements. Valid response options for MCM and MCS type questions may be retrieved via the following series of instructions:

```

"SELECT response_id, response_text
  FROM resp_short
    WHERE question_id=$question_id[$j] AND
language='$this_lang'
  ORDER BY response_id"

if ($question_type eq 'MCM') {
  $response_id = 'f' . $question_id[$j] . '.' . $response_id;
  $value='Y'; }
else {
  $value=$response_id;
  $response_id = 'f' . $question_id[$j]; }
print qq(<input type="$form_input" value="$value"
name="$response_id"></td>);

```

SDI type questions enable a respondent to respond to a question based upon a weighted scale. In one embodiment, SDI type questions are each presented with one or more statements to which the respondent is given the opportunity to enter their level of agreement. **Figure 4** is a graphical illustration of a semantic differential (SDI) question in accordance with one embodiment of the invention. Referring briefly to **Figure 4**, question **402** is displayed in window **400** along with associated statements **1-N**. Displayed adjacent to each of statements **1-N** are corresponding valid response options indicated by radio

buttons **404**. Each of the respective response options (e.g., radio buttons **404**) are weighted on a numeric scale, corresponding to labels ranging from strongly agree to strongly disagree. Valid response options for SDI question types may be retrieved via the following series of instructions:

```
$response_id = 'f' . $question_id[$j] . ' ' . $response_id;
for ($y=1; $y<=5; $y++)
print qq(<input type="radio" value="$the_val" name="$response_id">);
print "\n";
```

Additionally, dialog button **406** is dynamically generated to display a context appropriate message. For example, if the currently displayed question is the next to last question, "next question" is displayed, whereas if the currently displayed question is the last question, "Finish" is displayed.

Referring back to **Figure 3**, once the questions and responses are displayed (block **312**), the routine detects whether the respondent wishes to proceed to the next question, e.g. by detecting the respondent's clicking on dialog button **406**, (block **313**), and upon so detecting, performs a check function which checks whether a respondent has in fact, responded to the question, block **314**. If the respondent has responded to the question, the system determines whether the response is valid given the valid response options, block **318**. If the response is not valid, the current question and valid response options are redisplayed, whereas if the response is valid, the next question and corresponding valid response options are displayed. Similarly, if the respondent has not responded to the question (block **316**) and it is determined that a response is required (e.g. via the response_required field), the current question and valid response options are redisplayed. If, however, it is determined that a response is not required (block **316**), the next question and corresponding response options are displayed, block **320**.

Displaying a Product and/or Marketing Concept

In displaying a concept to a respondent, it is often important to convey sufficient information to enable the respondent to understand the idea that is

being presented as well as to assess whether this idea would be appealing to them. In one embodiment of the invention, this is accomplished by including within the concept display, information that is comprised of some combination of text, images and pricing data. Additionally, a variety of fonts, styles and font sizes are utilized in order to emphasize and enhance certain information and text. Moreover, concepts may include images that are either still or animated and may incorporate sound, video or other multimedia information to enhance the virtual experience intended to be conveyed by the concept. As will be discussed in further detail below in accordance with one embodiment of the invention, various price points may be generated and displayed in association with a concept in order to further enhance the research value of the concept. In one embodiment, the price points are adjusted for the respondent's geographic location (i.e. country) and are displayed in the respondent's national currency.

In one embodiment, the concept is divided into multiple sections with each section of the concept capable of displaying a unique font, font size and/or font style. Briefly jumping ahead, a graphic illustration of a marketing concept including differently formatted sections is shown in **Figure 6**. Marketing concept **600** is shown including sections **1-4** and concept price **602**. In accordance with one embodiment of the invention, concept price **602** is randomly generated based at least in part upon provided pricing constraints.

Referring now back to **Figure 5**, an operational flow of for displaying concept-specific marketing information in accordance with one embodiment of the invention is illustrates. At block **502**, section-specific information for an identified concept is retrieved from a data store such as databases **212**. The retrieval may be accomplished using the following query instruction:

```
"SELECT section_type, section_text, section_font, section_fontsize,  
section_style, section_alignment, section_action, image_id  
FROM concept_sections  
WHERE concept_id=$concept_id AND  
concept_lang='$lang' ORDER BY section_sequence"
```

In accordance with one embodiment of the invention, and as depicted in the query language shown above, the section-specific information is retrieved in accordance with the preferred language of the respondent. Once the section-specific information has been retrieved, the text associated with each section (i.e., \$section_text) is appropriately formatted and displayed based upon the retrieved formatting information, block 504. At block 506, a price point is generated for the product concept illustrated and described by the various retrieved text and image sections. Price point generation will be discussed below with respect to Figure 7. Once a price point has been generated, a financial incentive to be awarded to a respondent in exchange for the respondent's participation in the study (i.e. by responding to the electronic survey) is determined and displayed in conjunction with the generated price point, block 508. In one embodiment, the financial incentive is determined as a function of the generated price point. Once the price point and financial incentive are determined, either one or both are adjusted to take into account the respondent's geographic location such as the respondent's country of residence, blocks 510 & 512.

Because different economies have developed at different rates, it is sometimes desirable to adjust the financial incentive offered to respondents to more accurately reflect local norms such as cost of living, competitive conditions, etc. of the country within which the respondent resides. In one embodiment of the invention, the price point generated at block 506 is converted from the default currency, such as U.S. dollars, to a currency that corresponds to the respondent's geographic location as indicated by \$contact_country. In one embodiment, the respondent's currency, associated symbol, and conversion rates are retrieved from a database, such as databases 212 in order to perform the appropriate conversion. The retrieval may be accomplished using the following query instruction:

```
"SELECT currency, symbol, conversion
FROM currencies
WHERE country ='$contact_country'"
```

In one embodiment of the invention, the base level of incentive offered to a respondent is adjusted by assigning a coefficient to the incentive to either increase or decrease the incentive according to e.g. the respondent's geographic location. For example, such functionality may be implemented through the following exemplary instructions:

```
if ($the_country eq 'RU' $the_country='URE')
    {$factor=.6;}
elseif ($the_country eq 'JP')
    {$factor=1.3;}
else
    $factor=1.0
```

Price Point Determination

When conducting consumer research, it can be desirable to set a plurality of price points for a product concept being marketed. In order to preserve the efficacy of the data when testing with multiple price points, however, precaution should be taken against randomly assigned prices to a product every time the respondent takes or participates in the survey. This is because some respondents will learn that the price is reset upon each restart of the survey. Accordingly, without further precautions, respondents would be able to refresh the web page displaying the electronic survey multiple times in order to continually regenerate the price point until an acceptable one is displayed. To guard against this occurrence, in accordance with one embodiment of the invention, pricing information is set once per respondent. In one embodiment of the invention, each price point is generated based upon pre-set pricing constraints specific to the product concept being surveyed. In one embodiment, the generated price points are balanced along discrete intervals so that response information can be correlated versus pricing information that the respondent viewed in forming a decision about the concept that was displayed to them.

In **Figure 5**, an operational flow for displaying concept-specific marketing information including a price point was shown. **Figures 7(A-C)**

illustrate various operational flows for determining such a price point (such as that of **Figure 5**) in accordance with one embodiment of the invention.

Referring now to **Figure 7A**, pricing constraints associated with the product concept being surveyed are first retrieved using the &lookup_study subroutine (shown in **Figure 7B**). Basically, the &lookup_study subroutine retrieves pricing constraints such as a maximum price, a minimum price, and a various pricing intervals defined to exist there between. Once the pricing constraints have been retrieved, a price is generated for the product concept based at least in part upon the retrieved constraints (discussed further in **Figure 7C**). Once the price has been generated, it is stored in association with a respondent identifier and the corresponding survey identifier, block 706. Exemplary instructions to implement such a store procedure are:

```
"REPLACE into invite
(study_number,user_id,invite_date,price_point,started)
VALUES ($study_number,$contact_id[$i],$mdate',$the_price,")"
```

Figure 7C illustrates an operational flow for generating a price for a product concept as mentioned above with respect to **Figure 7A**, in accordance with one embodiment of the invention. In one embodiment, minimum and maximum price constraints (e.g., as determined from the &lookup_study function of **Figure 7B**) are passed to the &price_point function when it is called. At block 708, the routine determines whether the pricing constraints include any inadvertent errors. If so, the price is assigned to be equal to \$0, block 710, which value is then returned to the calling function, block 712. If, however the conditions of block 708 are met (namely, (\$the_price_points > 0) && (\$the_min_price > 0) && (\$the_max_price >= \$the_min_price)), then \$the_range is calculated to be the difference between the minimum and maximum price constraints, and \$interval_value is obtained from the division of \$the_range by the number of predetermined price points, block 714. If the minimum price constraint is greater than '100', the price is rounded to the nearest integer (block 722), whereas if the minimum price constraint is less

than '100', the price is not rounded, block 718. In either case, the generated price is then returned to the routine that called the function block 720, 724.

Electronic Confidentiality Disclosure Agreement

In some instances, where a survey is being conducted covering a topic that is deemed confidential, it is desirable to use a confidential disclosure agreement (CDA). In one embodiment of the invention, a CDA is administered online providing a traceable record of when and who agreed to the terms described in a CDA. **Figure 8** illustrates an operational flow for administering an electronic on-line CDA in accordance with one embodiment of the invention. To begin, the CDA is displayed in the preferred language of the respondent (blocks 802, 804). Once the respondent has read and agreed to the various terms of the CDA, they are instructed for example, to enter a unique password and select an "accept" button in order to indicate their acceptance to the terms of the CDA. Once such an acceptance is detected, block 806, the system verifies that the user has provided a proper password, block 808. Although not required, the password feature provides a mechanism by which to authenticate that the respondent agreeing to the terms of the CDA is in fact who they purport to be. If the identity of the respondent cannot be authenticated, block 810, the respondent is asked to again enter their password. If however, the respondent is authenticated, a record of the respondent's acceptance is stored in a table, block 812. In one embodiment, the respondent's name, study identifier, as well as the date & time when the respondent accepted the displayed terms is recorded.

Participant Selection

In accordance with the teachings of the present invention, once an electronic survey has been generated using, for example, the language specific content elements described above, the electronic survey is delivered to one or more identified survey participants. In one embodiment a service provider, such as multi-regional service provider 102 of **Figure 1**, includes electronic survey delivery services for facilitating the selection of one or more survey

participants from a multi-regional pool of potential panelists to whom the electronic survey shall be distributed, and for facilitating the distribution of the electronic survey to the selected one or more survey participants. In one embodiment, the service provider includes a search engine for searching through the multi-regional pool of potential panelists to identify one or more panelists to participate in the electronic survey based upon provided search criteria, such as participant country, language, age, interests, economic status, and so forth. In one embodiment, panelists matching at least a portion of the provided search criteria are identified and displayed to a research client, for example, to be selected for participation in the electronic survey. In an alternative embodiment, panelists matching at least a portion of the provided search criteria are automatically selected by the service provider, for example, for participation in the electronic survey.

In one embodiment of the invention, several graphical user interface screens are provided to facilitate entry of the search criteria and display of search results. **Figure 13** is a graphical illustration of a screen for providing search criteria for use in selecting panelists in accordance with one embodiment of the invention. As illustrated in **Figure 13**, a number of search criteria may be entered as part of a query for selecting survey participants. For example, such queries may be tailored based upon panelist identity information **1302**, panelist country, language & interest data **1304**, or by other preferences such as those shown in **Figure 13 (1306)**. For example, based upon the search criteria entry screen on **Figure 13**, a query may be constructed that will search for all panelists over a particular age, from Angola who are interested in advertising. In one embodiment, if checkbox **1308** is selected, the panelists resulting from the constructed query (i.e. matching the query criteria) are automatically selected as participants in the electronic survey, whereas if checkbox **1308** is not selected, the resulting panelists are displayed in a list from which the participants can be manually selected.

Figure 14 is a graphical illustration of a summary page displaying a list of panelists meeting search specified criteria in accordance with one embodiment of the invention. According to one embodiment of the invention,

checkboxes 1402 are provided to enable manual selection of one or more participants from the list of panelists resulting from the previously described query. In one embodiment, checkboxes 1402 are checked by default, whereas in an alternative embodiment checkboxes 1402 are unchecked by default. It should be noted that checkboxes 1402 could similarly be replaced by other graphical selection mechanisms known in the art, such as radio buttons for example.

In addition to selecting/deselecting a participant from the resulting list of panelists as described above, a research client may view further details associated with one or more panelists and/or provide additional criteria to further refine the list. For example, a research client can highlight an entry in the list and press a "continue" button to view more details about the associated panelist. Any number of details can be provided as discussed below with respect to **Figure 15**. Likewise, any number of alternate approaches can be used to view details such as "double clicking" on an entry of interest.

Panelists can also be assigned grades or ranks in the search result summary. For example, based on any number of criteria, such as information derived from responses made to previous research studies, each panelist may be assigned a grade or rank to categorize the panelist according to a subjective quality grade. In **Figure 14**, for example, column 'Q' (1404) is provided to facilitate such categorization. In various embodiment, a research client can automatically select groups of listed panelists by rank. For example, once at least some of the panelists have been ranked, depending upon the number of participants desired, a research client may opt to select all panelists with the rank of "A". If the research client determines that the resulting group of panelists is not large enough, the research client may go back and select all panelists having an "A" or "B" grade, for instance.

Once one or more panelists are selected from the resulting list of panelists, the selected panelists are invited to participate in an electronic survey. The research client may potentially have a number of electronic messages or invitations from which to select. For example, while creating an electronic survey, a research client may have generated a number of different

invitations offering to a participant, various levels of incentives such as compensation for participation in the electronic survey. One panelist who has received a high rank or grade, for example, may receive a larger incentive than a panelist that was ranked or graded lower. In one embodiment, invitation messages are independently selectable based upon a number of criteria. In various embodiments, invitation messages may be automatically selected based upon a rank or grade of a panelist, whereas in other embodiments invitation messages may be automatically selected based upon some other criteria such as age, economic status, location, ethnicity, religion, political affiliations, and so forth.

A research client may have created or have available, a number of different electronic surveys or variations of electronic surveys from which to chose to distribute to one or more selected panelists. In one embodiment, the research client may assign a panelist top a particular survey by entering an electronic survey code. Any number of criteria can be used to match surveys to panelists. For example, panelists offered a bigger incentive to participate may be assigned a longer, more detailed survey. Alternatively, a panelist may be offered multiple surveys having different levels of incentive for each.

Figure 15 is a graphical illustration of a panelist details page in accordance with one embodiment of the invention. A research client may use such details page to view details about a particular panelist and/or change certain panelist information. For example, a details page may include ranks or grades assigned to the panelist by previous research clients based upon subjective quality of data provided in previous surveys. A research client may be able to assign a new grade or change a previously assigned grade. A research client, depending upon the access authority, may also be able to change or update other information about a panelist, such as their address, age, and other demographic information, for example. In one embodiment, hypertext links to one or more of the electronic surveys previously completed by the panelist are provided.

Capturing Results

Once the electronic survey questions have been generated and delivered to the participant, and the participant (now turned respondent) has had an opportunity to answer the questions as described with respect to **Figure 3**, it is then necessary to store the respondent's responses in a database. In one embodiment, a list of questions that are included in the survey is read in as, an operating system environment, parameters submitted via a browser URL, an HTML field, or another stored source, for example. In one embodiment, this information is utilized to read in the corresponding responses for each of the questions using, for example, a CGI query. In one embodiment, the results are stored in a single database having one or more tables to collect the responses, depending upon the type of question asked.

Figures 9A and 9B illustrate an exemplary operational flow of a result capturing process in accordance with one embodiment of the invention. The total number of questions involved in the electronic survey is determined at block **902**, and the type of each question is determined at block **904**. In one embodiment, each question is characterized as being an MCM type question, an MCS type question, a FFT type question, or an SDI type question. If the question is determined to be an MCS type question (block **906**), the respondent's response is queried (block **914**) and then stored (i.e. replaced) into a table named "tab_results" along with the respondent ID, study number, and response date for example, block **916**. If the question is determined to be an FFT type question (block **908**), the respondent's response is likewise queried (block **918**) and then stored along with the corresponding respondent ID, study number, and response date data items. For the FFT question type, however, the response data is stored into a second table named "text_results". If the a question is determined to be an MCM type question (block **910**), each response ID and corresponding response text for the question are first retrieved in the respondent's preferred language from another table, block **922**. For example, the following instructions may be used to perform such a retrieval from a table named resp_short:

```
"SELECT response_id,response_text
FROM resp_short
```

```
WHERE question_id=$quest_id AND language='$lang'  
ORDER BY response_id");
```

Because multiple results are possible with the MCM type question, the result query varies slightly from the previous response queries, block 924. If the MCM query results in a value of "Y" indicating that at least one response has been selected, the selected responses and supporting data are stored (i.e. replaced) into the tab_results table (block 926) as were the MCS question type response data. Lastly, if the question is determined to be an SDI type question (block 912), the same query illustrated above with respect to the MCM question type is performed with respect to the SDI question type, block 928. Likewise, the result query of an SDI type question (block 930) is formed substantially similar to that of the MCM type question (block 924). and the data is stored in a tab_results table much like MCM question types, block 932.

Exemplary Computer System

Figure 10 illustrates an example computer system suitable for use to practice the present invention, in accordance with one embodiment. Computer system **1000** may represent any of a wide variety of devices such as but not limited to conventional desktop computers, laptop computers, handheld computers, personal digital assistant (PDA), wireless telephones utilizing i-Mode and/or wireless access protocols (WAP), and so forth. As shown, computer system **1000** includes one or more processors **1002** and system memory **1004**. Additionally, computer system **1000** includes mass storage devices **1006** (such as diskette, hard drive, CDROM and so forth), input/output devices **1008** (such as keyboard, cursor control and so forth) and communication interfaces **1010** (such as network interface cards, modems and so forth). The elements are coupled to each other via system bus **1012**, which represents one or more buses. In the case of multiple buses, they are bridged by one or more bus bridges (not shown). Each of these elements performs its conventional functions

known in the art. In particular, system memory **1004** and mass storage **1006** are employed to store a working copy and a permanent copy of the programming instructions implementing the multi-region market research processing service of the present invention. The permanent copy of the programming instructions may be loaded into mass storage **1006** in the factory, or in the field, as described earlier, through a distribution medium (not shown) or through communication interface **1010** (from a distribution server (not shown)). The constitution of these elements **1002-1012** are known, and accordingly will not be further described.

While the present invention has been described in terms of the above illustrated embodiments, those skilled in the art will recognize that the invention is not limited to the embodiments described. The present invention can be practiced with modification and alteration within the spirit and scope of the appended claims. The description is thus to be regarded as illustrative instead of restrictive on the present invention.

What is claimed is:

1. A method of determining a price for a product concept of an electronic survey, the method comprising:
 - receiving data identifying the electronic survey involving the product concept;
 - retrieving stored pricing constraints for the product concept based at least in part upon the identified electronic survey;
 - generating a price for the product concept based at least in part upon the pricing constraints;
 - storing the price for the product concept in association with the identified electronic survey and in association with an identifier representing a respondent; and
 - providing to the respondent, access to the electronic survey for the product concept, wherein the price for the product concept is displayed to the respondent, and wherein for each successive access of the electronic survey by the respondent the price for the product concept remains unchanged.
2. The method of claim 1, further comprising:
 - generating a second price for the product concept based at least in part upon the retrieved pricing constraints;
 - storing the second price for the product concept in association with the identified electronic survey and in association with a second identifier representing a second respondent; and
 - providing to the second respondent, access to the electronic survey for the product concept, wherein the second price for the product concept is displayed to the second respondent, and wherein for each successive access of the electronic survey by the second respondent the second price for the product concept also remains unchanged.
3. The method of claim 1, wherein the pricing constraints comprise a minimum price constraint and a maximum price constraint, which together define an allowable range for the price.

4. The method of claim 3, wherein the price is randomly generated to fall within the allowable range.
5. The method of claim 3, wherein the pricing constraints further constrain the price to fall within the allowable range upon one of a plurality of discrete pricing intervals.
6. The method of claim 1, wherein the price is associated with a first currency of a first geographical location, the method further comprising:
 - identifying a second currency associated with a geographical location of the respondent;
 - converting the price from the first currency of the first geographical location to the second currency associated with a geographical location of the respondent based at least in part on a conversion factor between the first and second currencies, if the first and second currencies are not the same.
7. The method of claim 1, further comprising:
 - determining an amount of a financial incentive for the respondent to receive in exchange for the respondent completing the electronic survey.
8. The method of claim 7, wherein the financial incentive is determined based at least in part upon the price.
9. The method of claim 8, wherein the financial incentive is adjusted based upon the respondent's geographic location.
10. A method comprising:
 - dynamically generating a price for a product concept of an electronic survey based at least in part upon predetermined pricing constraints; and
 - associating the generated price with a respondent such that each time the respondent accesses the electronic survey, the same generated price is displayed to the respondent.
11. The method of claim 10, further comprising:
 - generating a second price for the product concept based at least in part upon the pricing constraints;
 - storing the second price for the product concept in association with the electronic survey and in association with a second identifier representing a second respondent; and

providing to the second respondent, access to the electronic survey for the product concept, wherein the second price for the product concept is displayed to the second respondent, and wherein upon each successive access of the electronic survey by the second respondent the second price for the product concept is also displayed.

12. The method of claim 11, wherein the price is associated with a first currency of a first geographical location, the method further comprising:

identifying a currency associated with the geographical location of the respondent;

converting the price from the first currency of the first geographical location to the second currency based at least in part on a conversion factor associated with the first and second currencies, if the first and second currencies are not the same.

13. The method of claim 10, wherein the pricing constraints comprise a minimum price constraint and a maximum price constraint, which together define an allowable range for the generated price.

14. The method of claim 13, wherein the pricing constraints further constrain the price to fall within the allowable range and to coincide with one of a plurality of discrete pricing intervals.

15. A method comprising:

retrieving from a data store, a plurality of electronic survey questions composed according to a first language, wherein each of said plurality of electronic survey questions is associated with at least one of a plurality of question types, and one or more response criteria;

displaying in a preferred language identified by a respondent, a select one of said plurality of electronic survey questions;

receiving from the respondent, a response to said select one of said plurality of electronic survey questions; and

validating said response to said select one of said plurality of electronic survey questions based at least in part upon said one or more response criteria associated with the first of said plurality of electronic survey questions.

6. The method of claim 15, wherein said one or more response criteria comprises an identifier indicating whether a response to the first of said plurality of electronic survey questions is required.

17. The method of claim 16, further comprising:

storing said response to said select one of said plurality of electronic survey questions into at least one of a plurality of tables corresponding to said plurality of question types independent of said preferred language.

18. The method of claim 17, wherein said storing occurs only after each of said plurality of electronic survey questions requiring a response has been answered.

19. The method of claim 16, wherein if said identifier indicates said response to the first of said plurality of electronic survey questions is required, displaying a second of said plurality of electronic survey questions to the respondent only after said response is received from the respondent and validated.

20. The method of claim 15, wherein said plurality of question types includes at least one of a multiple choice question type, a semantic differential question type, and a free-form text question type.

21. The method of claim 15, wherein said one or more response criteria comprises an identifier indicating a sort order according to which said plurality of electronic survey questions are displayed to the respondent.

22. The method of claim 15, wherein said plurality of electronic survey questions are retrieved and displayed within a single web page.

23. The method of claim 15, wherein said select one of said plurality of electronic survey questions is not displayed until an electronic confidentiality disclosure agreement (CDA) is submitted by the respondent.

24. A method for conducting an electronic survey in a preferred language chosen from a large number of supported languages, the method comprising:

setting a language as a preferred language;

determining a character code set for the electronic survey based on the preferred language; and

generating a meta statement of a header element of at least a portion of the electronic survey setting a character code setting to the determined character code set.

25. The method of claim 24, wherein the method further comprises generating graphic/image contents of the electronic survey by accessing a graphic/image library having a plurality of language specific graphics/images specifically designed for the supported languages, and retrieving one or more of the language specific graphics/images from the graphic/image library based on the preferred language.

26. The method of claim 24, wherein the method further comprises generating textual contents of the electronic survey by accessing a message library having a plurality of messages expressed in the supported languages, and retrieving one or more of the messages from the message library based on the preferred language.

27. The method of claim 24, wherein the method further comprises generating one or more links expressed in the preferred language for the electronic survey. 28. The method of claim 24, wherein the method further comprises generating one or more pick lists of the electronic survey with each of the pick lists being ordered in view of the preferred language.

29. The method of claim 24, wherein the method further comprises generating a drop down list of languages for the electronic survey for changing the preferred language to another one of the supported languages.

30. A method for conducting an electronic survey in a preferred language chosen from a large number of supported languages, the method comprising:

setting a language as a preferred language; and

generating graphic/image contents of the electronic survey by accessing a graphic/image library having a plurality of language specific graphics/images specifically designed for the supported languages, and retrieving one or more of the language specific graphics/images from the graphic/image library based on the preferred language.

31. The method of claim 30, wherein the method further comprises setting a character code setting for the electronic survey based on the preferred

language. 32. A method for conducting an electronic survey in a preferred language chosen from a large number of supported languages, the method comprising:

- setting a language as a preferred language; and

- generating textual contents of the electronic survey by accessing a message library having a plurality of messages expressed in the supported languages, and retrieving one or more of the messages from the message library based on the preferred language.

33. The method of claim 32, wherein the method further comprises setting a character code setting for the electronic survey based on the preferred

language. 34. A method for conducting an electronic survey in a preferred language chosen from a large number of supported languages, the method comprising:

- setting a language as a preferred language;

- retrieving a language specific portion for each of one or more links to be generated for the electronic survey from a message table using a message identifier and an identifier of the preferred language; and
- generating the one or more links for the electronic survey, for each of the one or more links, combining a non-language specific portion with the retrieved language specific portion to form the link.

35. The method of claim 34, wherein the method further comprises setting a character code setting for the electronic survey based on the preferred

language. 36. A method for conducting an electronic survey in a preferred language chosen from a large number of supported languages, the method comprising:

- setting a language as a preferred language;

- determining an order criterion in view of the preferred language; and

- retrieving a plurality of pick list elements from a pick list element table, ordering the retrieved pick list elements in accordance with the order criterion, to generate one or more pick lists for the electronic survey.

37. The method of claim 36, wherein the method further comprises setting a character code setting for the electronic survey based on the preferred language. 38. An apparatus comprising:

a storage medium having stored therein a plurality of programming instructions designed to determine a price for a product concept of an electronic survey including:

instructions to identify the electronic survey involving the product concept,

instructions to retrieve stored pricing constraints for the product concept based at least in part upon the identified electronic survey,

instructions to generate a price for the product concept based at least in part upon the pricing constraints,

instructions to store the price for the product concept in association with the identified electronic survey and in association with an identifier representing a respondent, and

instructions to provide to the respondent, access to the electronic survey for the product concept, wherein the price for the product concept is displayed to the respondent, and wherein for each successive access of the electronic survey by the respondent the price for the product concept remains unchanged; and

one or more processors coupled to the storage medium to execute the programming instructions.

39. The apparatus of claim 38, wherein the plurality of programming instructions further include:

instructions to generate a second price for the product concept based at least in part upon the retrieved pricing constraints,

instructions to store the second price for the product concept in association with the identified electronic survey and in association with a second identifier representing a second respondent, and

instructions to provide to the second respondent, access to the electronic survey for the product concept, wherein the second price for the product concept is displayed to the second respondent, and wherein for each

successive access of the electronic survey by the second respondent the second price for the product concept is also displayed.

40. The apparatus of claim 38, wherein the pricing constraints comprise a minimum price constraint and a maximum price constraint, which together define an allowable range for the price.

41. The apparatus of claim 40, wherein the price is randomly generated to fall within the allowable range.

42. The apparatus of claim 40, wherein the pricing constraints further constrain the price to fall within the allowable range upon one of a plurality of discrete pricing intervals.

43. The apparatus of claim 38, wherein the price is associated with a first currency of a first geographical location, and the plurality of programming instructions further include:

instructions to identify a second currency associated with a geographical location of the respondent, and

instructions to convert the price from the first currency of the first geographical location to the second currency associated with the geographical location of the respondent based at least in part on a conversion factor between the first and second currencies, if the first and second currencies are not the same.

44. The apparatus of claim 38, wherein the plurality of programming instructions further comprise instructions to determine an amount of a financial incentive for the respondent to receive in exchange for the respondent completing the electronic survey.

45. The apparatus of claim 44, wherein the financial incentive is determined based at least in part upon the price.

46. The apparatus of claim 45, wherein the financial incentive is adjusted based upon the respondent's geographic location.

47. An apparatus comprising:

a storage medium having stored therein a plurality of programming instructions designed to determine a price for a product concept of an electronic survey including:

instructions to dynamically generate a price for the product concept of the electronic survey based at least in part upon predetermined pricing constraints, and

instructions to associate the generated price with a respondent such that each time the respondent accesses the electronic survey, the same generated price is displayed to the respondent; and

one or more processors coupled to the storage medium to execute the programming instructions.

48. The apparatus of claim 47, wherein the programming instructions further comprise:

instructions to generate a second price for the product concept based at least in part upon the pricing constraints,

instructions to store the second price for the product concept in association with the electronic survey and in association with a second identifier representing a second respondent, and

instructions to provide to the second respondent, access to the electronic survey for the product concept, wherein the second price for the product concept is displayed to the second respondent, and wherein upon each successive access of the electronic survey by the second respondent the second price for the product concept remains unchanged.

49. The apparatus of claim 48, wherein the price is associated with a first currency of a first geographical location, and the programming instructions further comprise:

instructions to identify a second currency associated with a geographical location of the respondent, and

instructions to convert the price from the first currency of the first geographical location to the second currency associated with the geographical location of the respondent, based at least in part on a conversion factor between the first and second currencies, if the first and second currencies are not the same.

50. The apparatus of claim 47, wherein the pricing constraints comprise a minimum price constraint and a maximum price constraint, which together define an allowable range for the generated price.

51. The apparatus of claim 50, wherein the pricing constraints further constrain the price to fall within the allowable range and to coincide with one of a plurality of discrete pricing intervals.

52. An apparatus comprising:

a storage medium having stored therein a plurality of programming instructions, which when executed, cause the apparatus to:

retrieve from a data store, a plurality of electronic survey questions composed according to a first language, wherein each of said plurality of electronic survey questions is associated with at least one of a plurality of question types, and one or more response criteria,

display in a preferred language identified by a respondent, a select one of said plurality of electronic survey questions,

receive from the respondent, a response to said select one of said plurality of electronic survey questions, and

validate said response to said select one of said plurality of electronic survey questions based at least in part upon said one or more response criteria associated with the first of said plurality of electronic survey questions; and

one or more processors coupled to the storage medium to execute the programming instructions.

53. The apparatus of claim 52, wherein said one or more response criteria comprises an identifier indicating whether a response to the first of said plurality of electronic survey questions is required.

54. The apparatus of claim 53, wherein the programming instructions further comprise instructions to:

store said response to said select one of said plurality of electronic survey questions into at least one of a plurality of tables corresponding to said plurality of question types independent of said preferred language.

55. The apparatus of claim 54, wherein said response is stored only after each of said plurality of electronic survey questions every question requiring a response has been answered.

56. The apparatus of claim 53, wherein the programming instructions further comprise instructions to display a second of said plurality of electronic survey questions to the respondent if said identifier indicates said response to the first of said plurality of electronic survey questions is required, and only after said response is received from the respondent and validated.

57. The apparatus of claim 52, wherein said plurality of question types includes at least one of a multiple choice question type, a semantic differential question type, and a free-form text question type.

58. The apparatus of claim 52, wherein said one or more response criteria comprises an identifier indicating a sort order according to which said plurality of electronic survey questions are displayed to the respondent.

59. The apparatus of claim 52, wherein the programming instructions further comprise instructions to retrieve and display said plurality of electronic survey questions within a single web page.

60. The apparatus of claim 52, wherein the programming instructions further comprise instructions to display said select one of said plurality of electronic survey questions only after an electronic confidentiality disclosure agreement (CDA) is submitted by the respondent.

61. An apparatus comprising:

a storage medium having stored therein a plurality of programming instructions designed to implement a plurality of support functions in support of an electronic survey delivery engine in delivering an on-line electronic survey in a preferred language, including a first function to set a language as a preferred language, and a second function to determine a character code set based on the preferred language, and generate meta statement of a header element of a content page setting a character code setting to the character code set; and one or more processors coupled to the storage medium to execute the programming instructions.

62. An apparatus comprising:

a storage medium having stored therein a plurality of programming instructions designed to implement a plurality of support functions in support of an electronic survey delivery engine in delivering an on-line electronic survey in a preferred language, including a first function to set a language as a preferred language, and a second function to generate graphic/image contents of at least a subset of the electronic survey by accessing a graphic/image library having a plurality of language specific graphics/images specifically designed for the supported languages, and retrieving one or more of the language specific graphics/images from the graphic/image library based on the preferred language; and

one or more processors coupled to the storage medium to execute the programming instructions.

63. An apparatus comprising:

a storage medium having stored therein a plurality of programming instructions designed to implement a plurality of support functions in support of an electronic survey delivery engine in delivering an on-line electronic survey in a preferred language, including a first function to set a language as a preferred language, and a second function to generate textual contents of at least a subset of the electronic survey by accessing a message library having a plurality of messages expressed in the supported languages, and retrieving one or more of the messages from the message library based on the preferred language; and

one or more processors coupled to the storage medium to execute the programming instructions.

64. An apparatus comprising:

a storage medium having stored therein a plurality of programming instructions designed to implement a plurality of support functions in support of an electronic survey delivery engine in delivering an on-line electronic survey in a preferred language, including a first function to set a language as a preferred language, and a second function to retrieve a language specific portion for each of one or more links to be generated for at least a subset of the electronic survey, based on the preferred language, and combining one or more non-

language specific portions with said retrieved one or more language specific portions to generate said one or more links for the electronic survey; and one or more processors coupled to the storage medium to execute the programming instructions.

65. An apparatus comprising:

a storage medium having stored therein a plurality of programming instructions designed to implement a plurality of support functions in support of an electronic survey delivery engine in delivering an on-line electronic survey in a preferred language, including a first function to set a language as a preferred language, and a second function to determine an order criterion based on the preferred language, and retrieve a plurality of pick list elements from a pick list table, ordering the retrieved pick list elements in accordance with the determined order criterion to generate one or more pick lists for at least a subset of the electronic survey; and one or more processors coupled to the storage medium to execute the programming instructions.

66. An apparatus comprising:

a storage medium having stored therein a plurality of programming instructions designed to implement a plurality of support functions in support of an electronic survey delivery engine in delivering an on-line electronic survey in a preferred language, including a first function to set a language as a preferred language, a second function to generate at least a subset of the electronic survey based on the preferred language, including a drop down list of languages for changing the preferred language to another one of a plurality of supported languages, and the second function regenerating the electronic survey based on the preferred language whenever one of the drop down list of languages is selected; and

one or more processors coupled to the storage medium to execute the programming instructions.

67. A method comprising:

receiving one or more preferred search criteria to facilitate identification of one or more panelists from a multi-regional pool of potential panelists to participate in an electronic survey;

searching said multi-regional pool of potential panelists to identify said one or more panelists based at least in part upon said received one or more preferred search criteria; and
inviting said identified one or more panelists to participate in the electronic survey.

68. The method of claim 67, wherein said one or more preferred search criteria are selected from one or more categories of search criteria including a country category, a language category, an interest category, an age category, and an income category.

69. The method of claim 67, further comprising:
assigning an indexable ranking value to any of the one or more identified panelists.

70. The method of claim 69, further comprising:
inviting a subset of said identified one or more panelists based at least in part upon said assigned ranking value.

71. The method of claim 67, wherein inviting comprises:
identifying a select one of a plurality of electronic surveys to distribute to at least a subset of said identified one or more panelists;
identifying a select one of a plurality of text messages to distribute to said subset of said identified one or more panelists in association with said select one of a plurality of electronic surveys; and
distributing said select one of a plurality of text messages and said select one of a plurality of electronic surveys to said identified one or more panelists.

72. An apparatus comprising:
a storage medium having stored therein a plurality of programming instructions designed to:

receive one or more preferred search criteria to facilitate identification of one or more panelists from a multi-regional pool of potential panelists to participate in an electronic survey;

search said multi-regional pool of potential panelists to identify said one or more panelists based at least in part upon said received one or more preferred search criteria; and
invite said identified one or more panelists to participate in the electronic survey.

73. The apparatus of claim 72, wherein said one or more preferred search criteria are selected by a research client from one or more categories of search criteria including a country category, a language category, an interest category, an age category, and an income category.

74. The apparatus of claim 72, further comprising programming instructions to:
assign an indexable ranking value to any of the one or more identified panelists.

75. The apparatus of claim 74, further comprising programming instructions to:

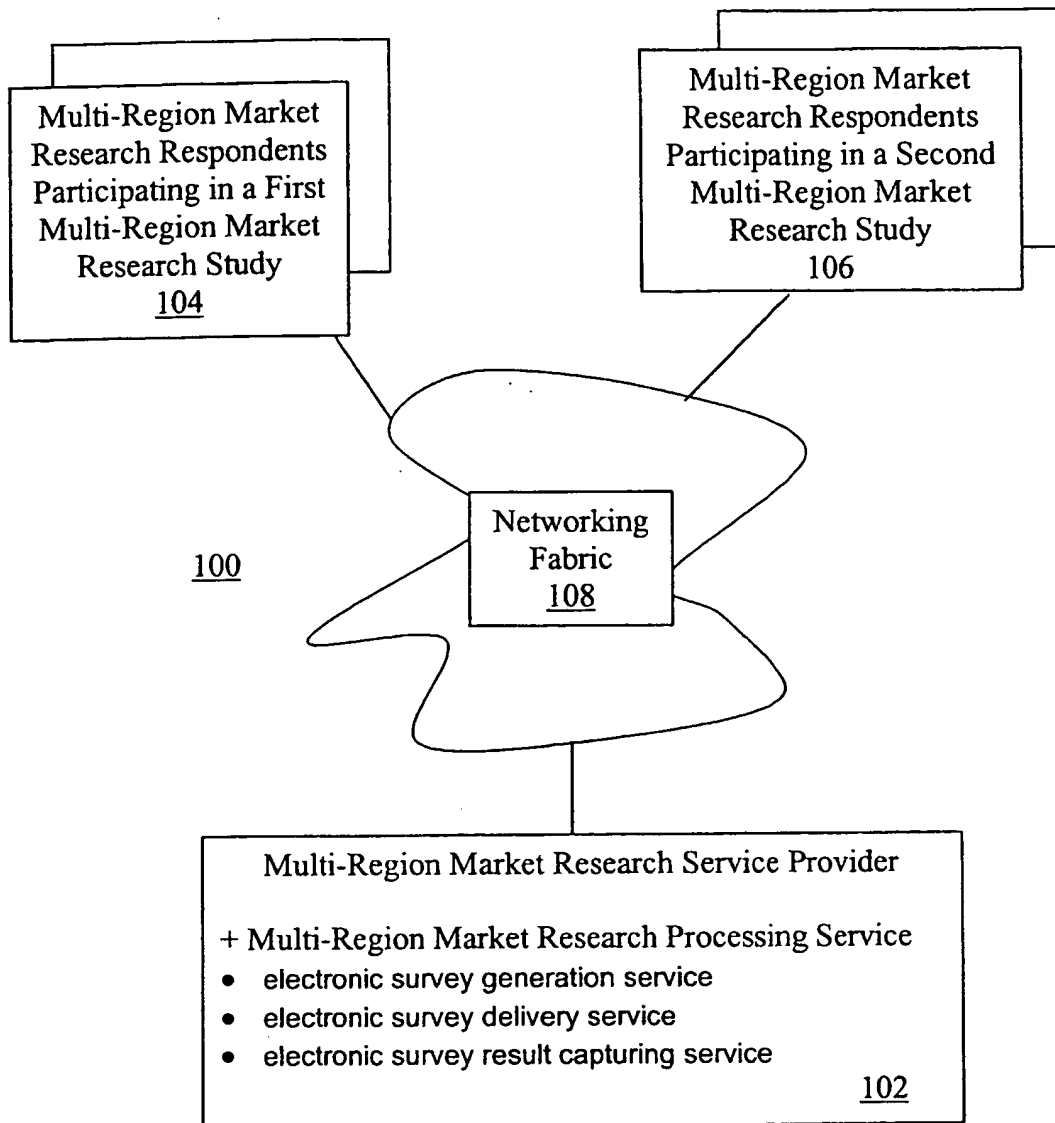
invite a subset of said identified one or more panelists based at least in part upon said assigned ranking value.

76. The apparatus of claim 72, wherein inviting comprises:

identifying a select one of a plurality of electronic surveys to distribute to at least a subset of said identified one or more panelists;

identifying a select one of a plurality of text messages to distribute to said subset of said identified one or more panelists in association with said select one of a plurality of electronic surveys; and

distributing said select one of a plurality of text messages and said select one of a plurality of electronic surveys to said identified one or more panelists.

**Figure 1**

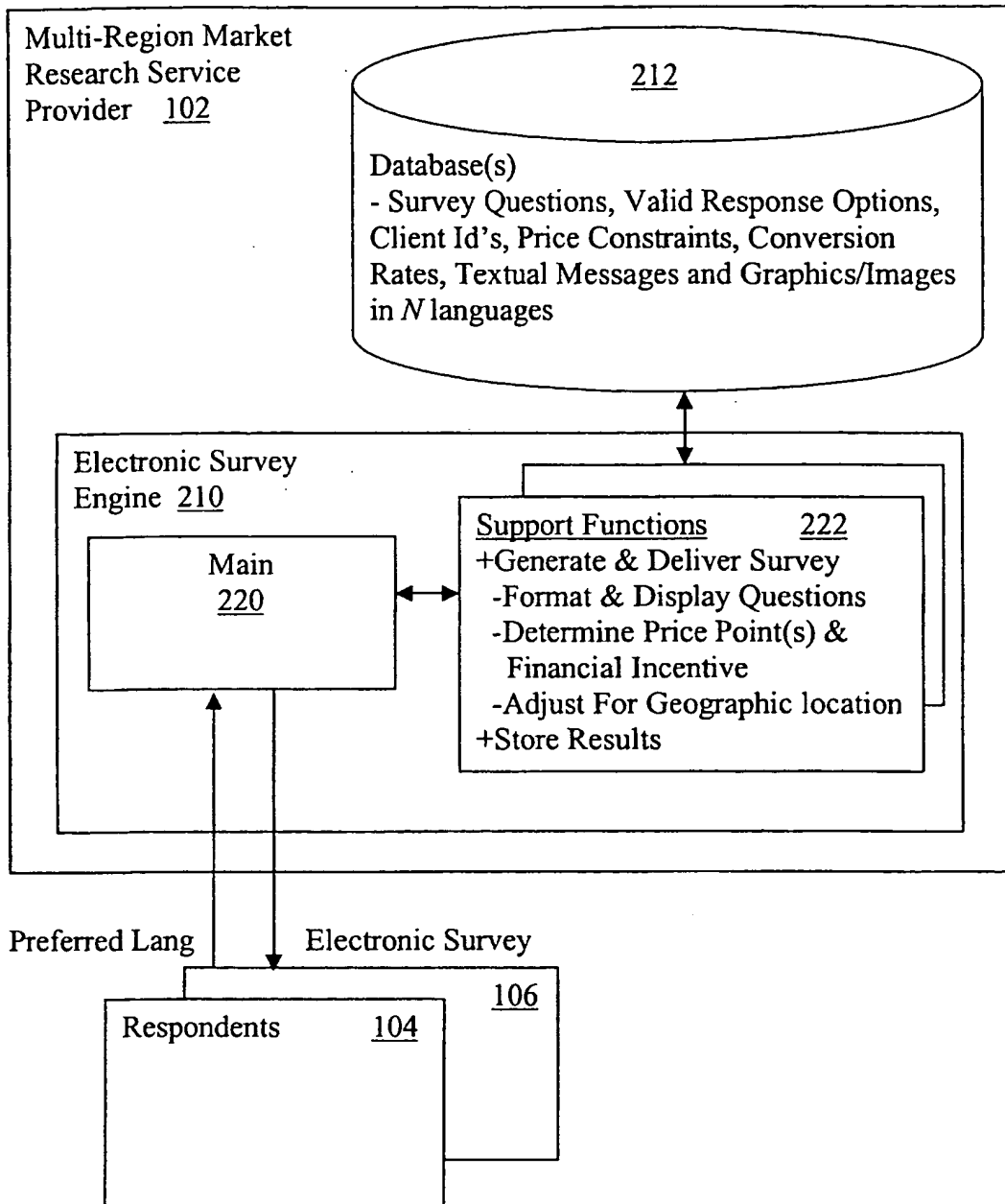


Figure 2

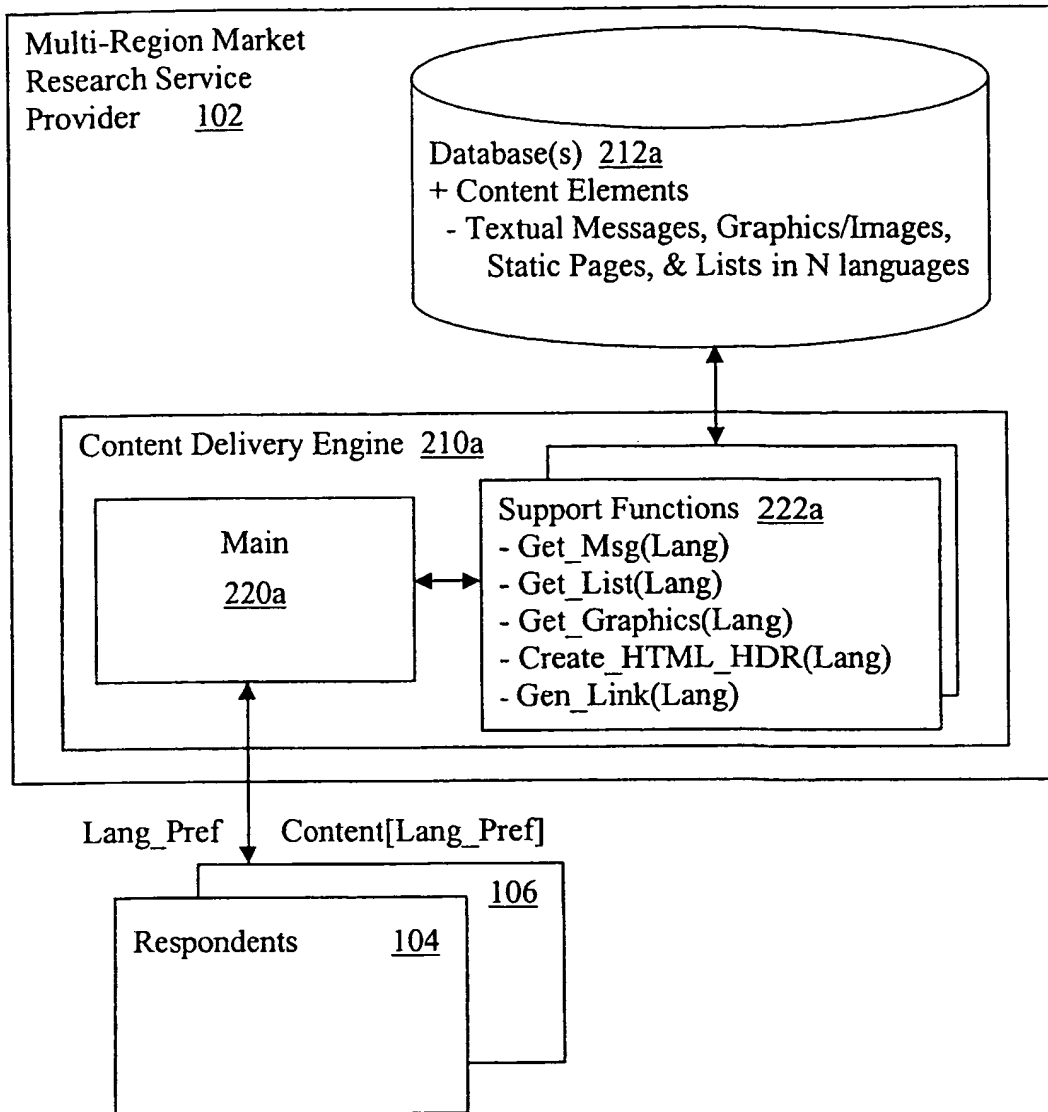


Figure 2a

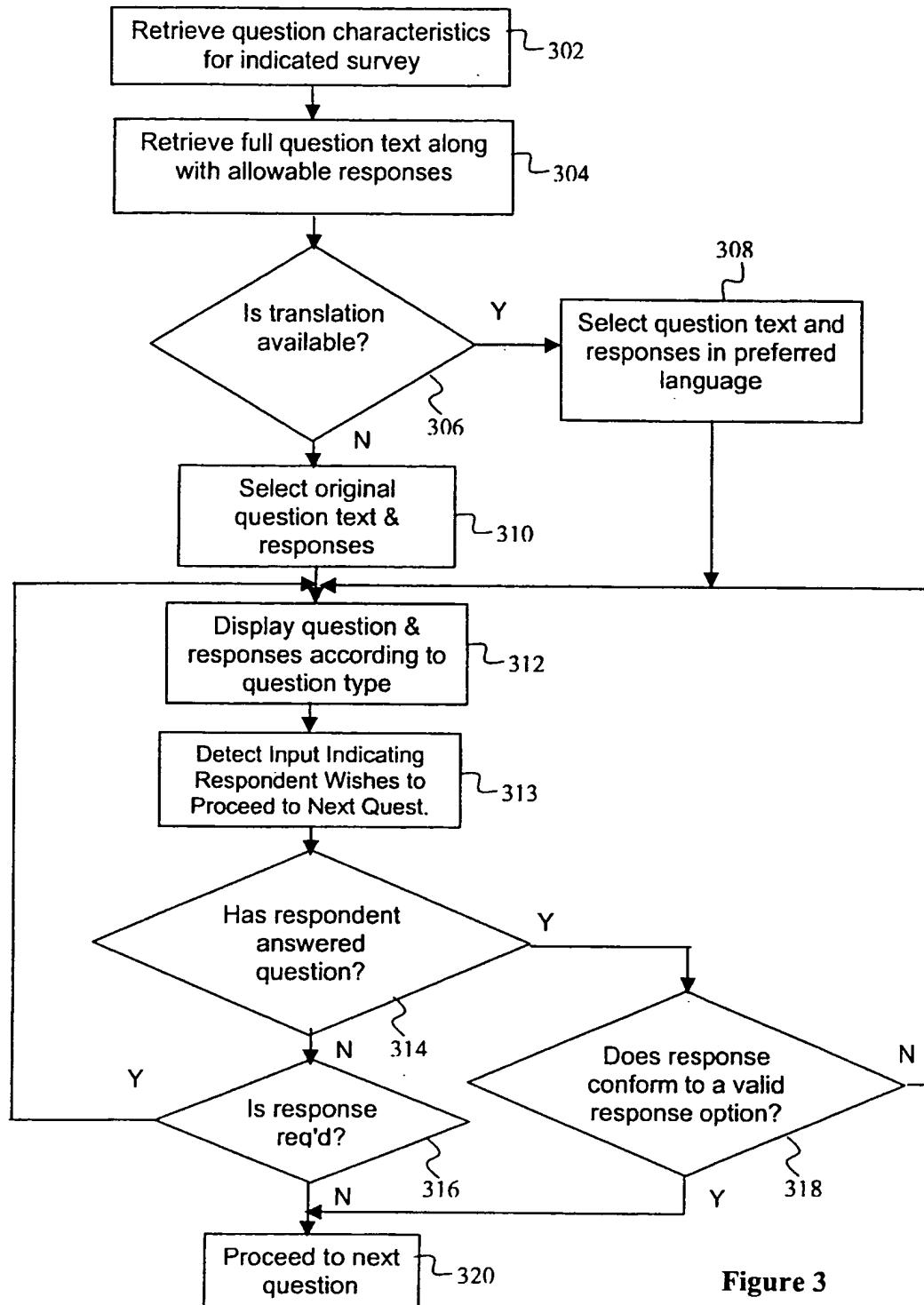


Figure 3

The diagram illustrates a survey interface within a window. The window has a title bar with three small square buttons on the right. The main content area contains a survey form. At the top of the form is a label 'QUESTION #' with a pointer '402'. Below this is a table with five rows, each representing a statement. Each row has a statement label, a 'STRONGLY AGREE' label, a five-point scale of circles, and a 'STRONGLY DISAGREE' label. A bracket '404' groups the five circles of the first row. Below the table is a 'Next Question' button with a pointer '406'. A bracket '400' groups the entire survey form area.

QUESTION #			
Statement 1	STRONGLY AGREE	○ ○ ○ ○ ○	STRONGLY DISAGREE
Statement 2	STRONGLY AGREE	○ ○ ○ ○ ○	STRONGLY DISAGREE
Statement 3	STRONGLY AGREE	○ ○ ○ ○ ○	STRONGLY DISAGREE
Statement 4	STRONGLY AGREE	○ ○ ○ ○ ○	STRONGLY DISAGREE
Statement <i>N</i>	STRONGLY AGREE	○ ○ ○ ○ ○	STRONGLY DISAGREE

Next Question

Figure 4

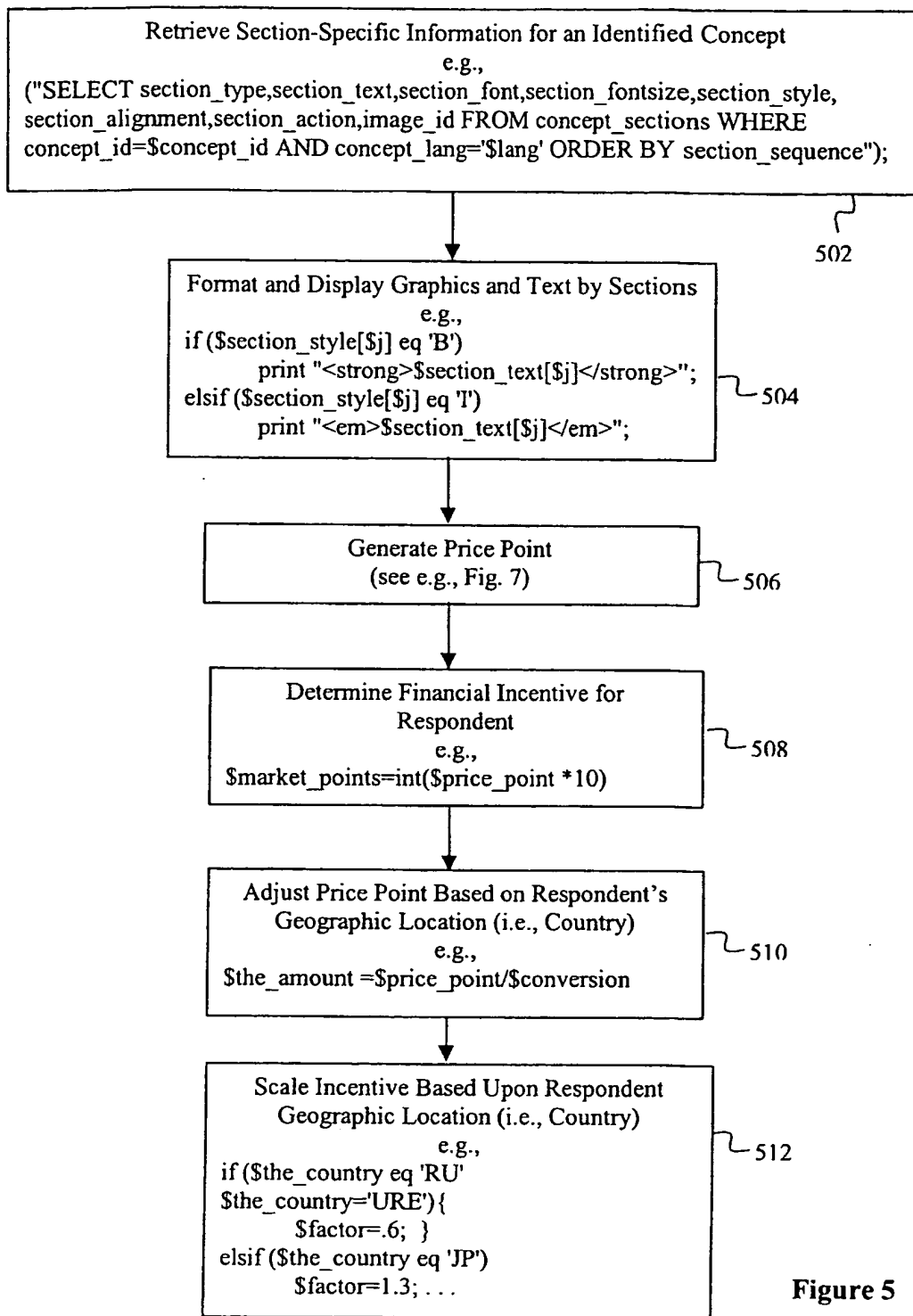


Figure 5

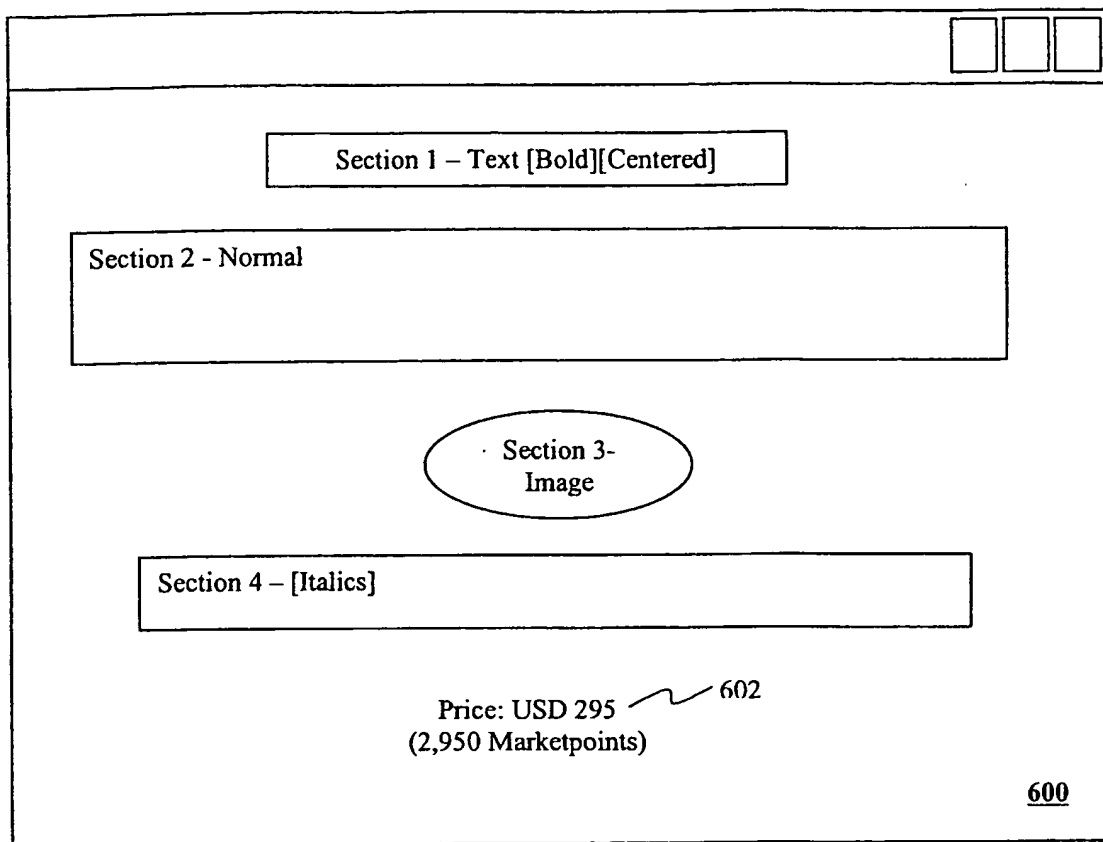


Figure 6

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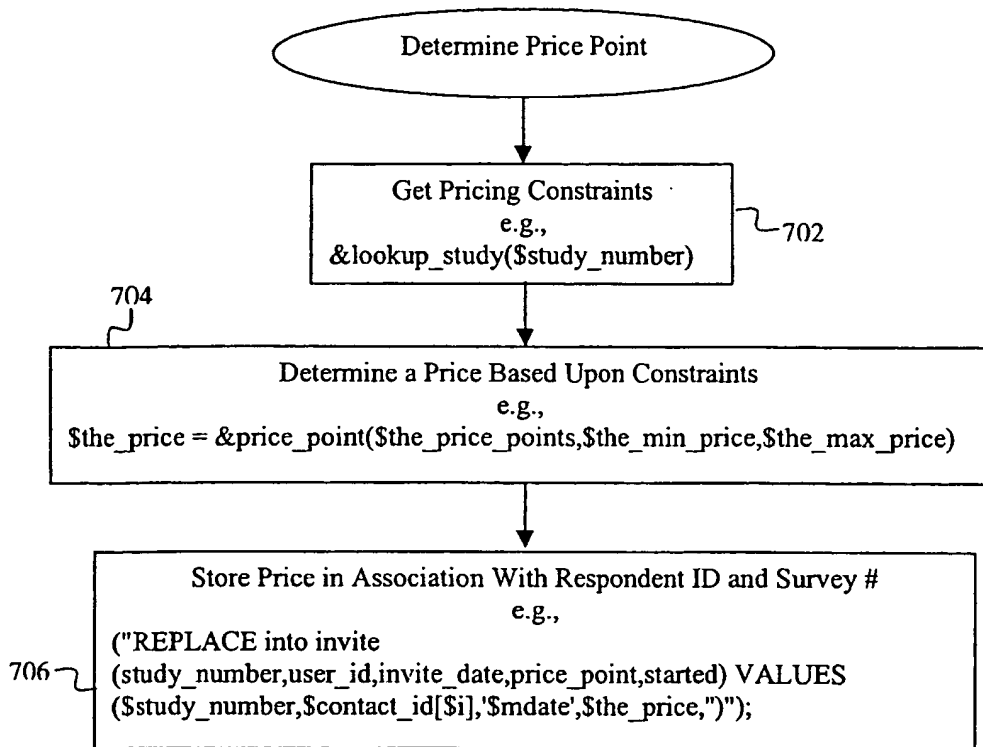


Figure 7A

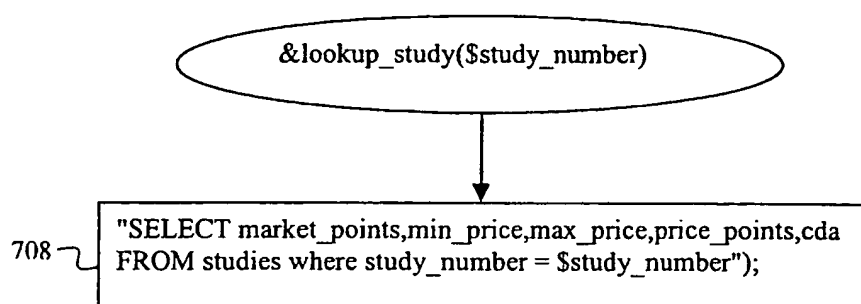


Figure 7B

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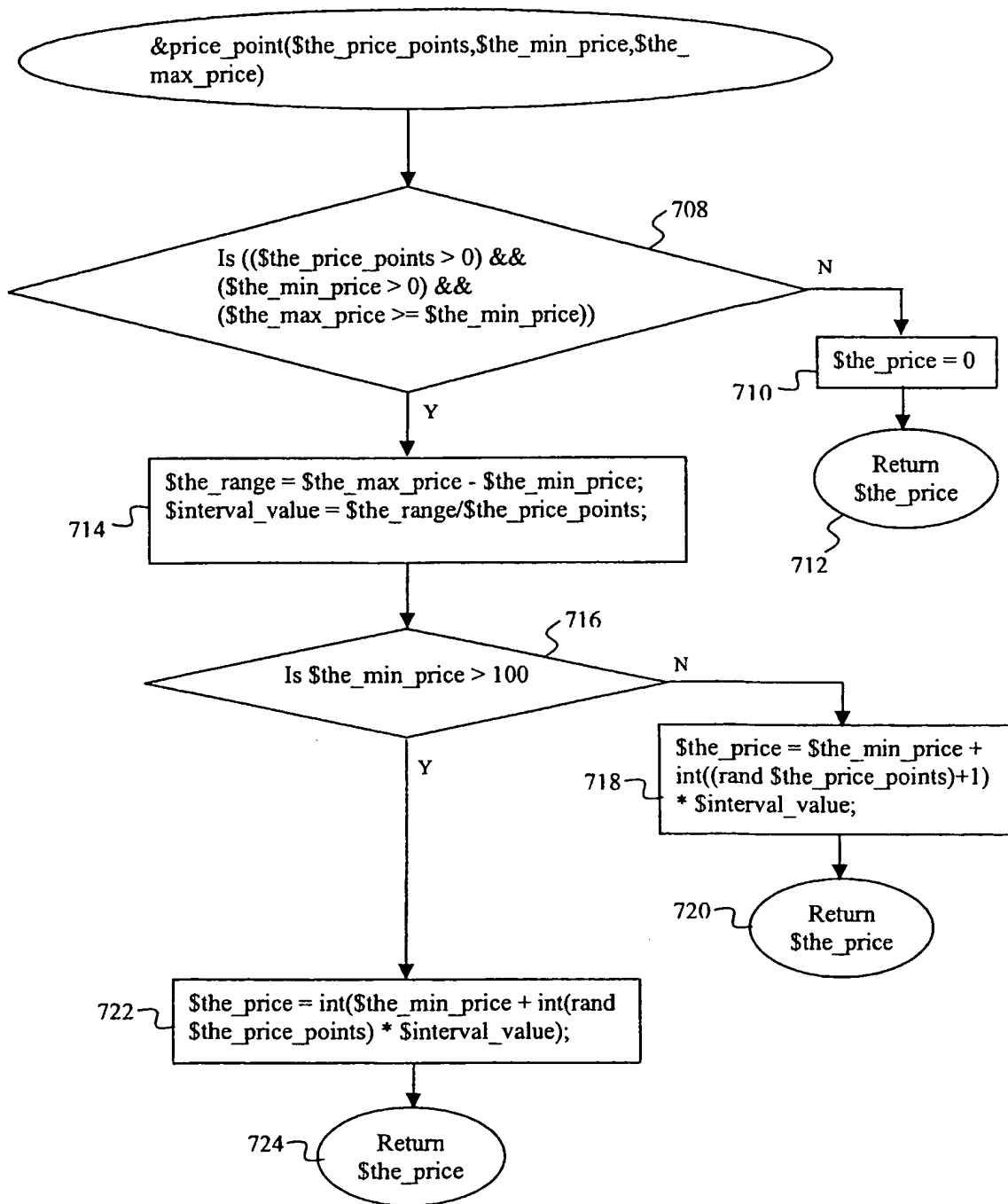


Figure 7C

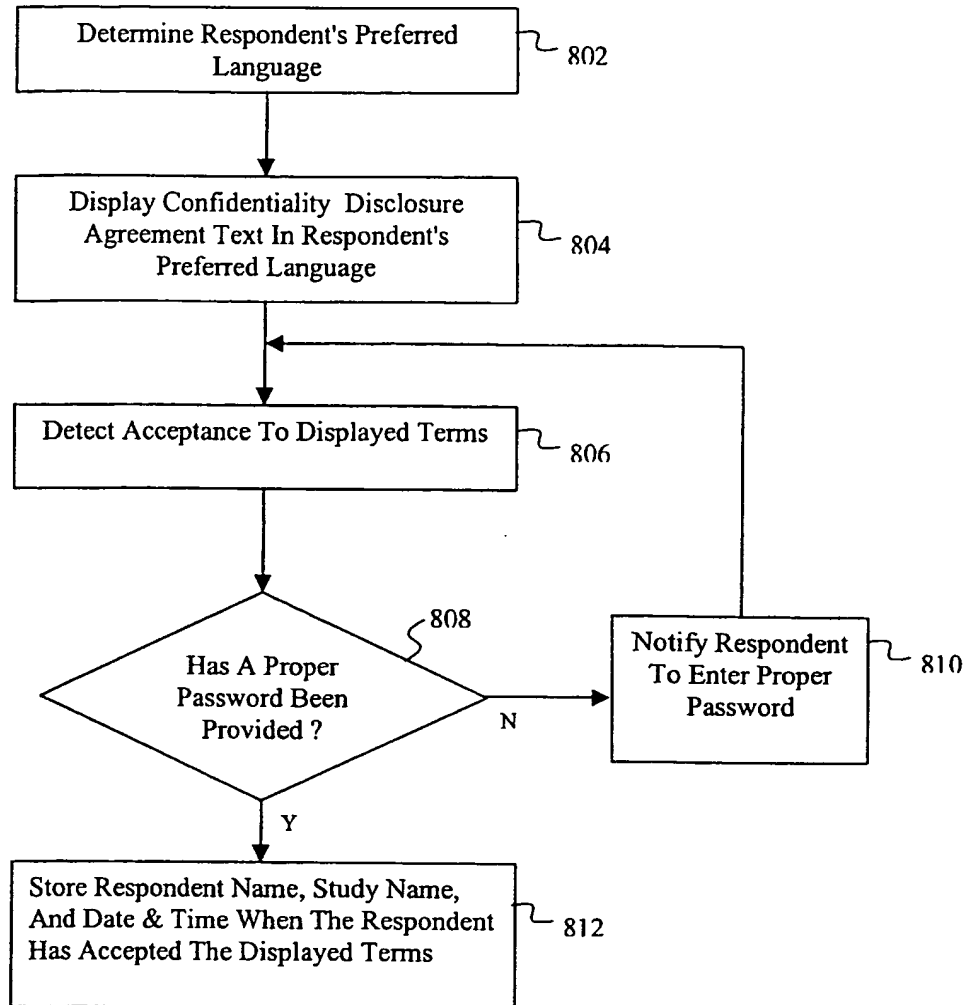


Figure 8

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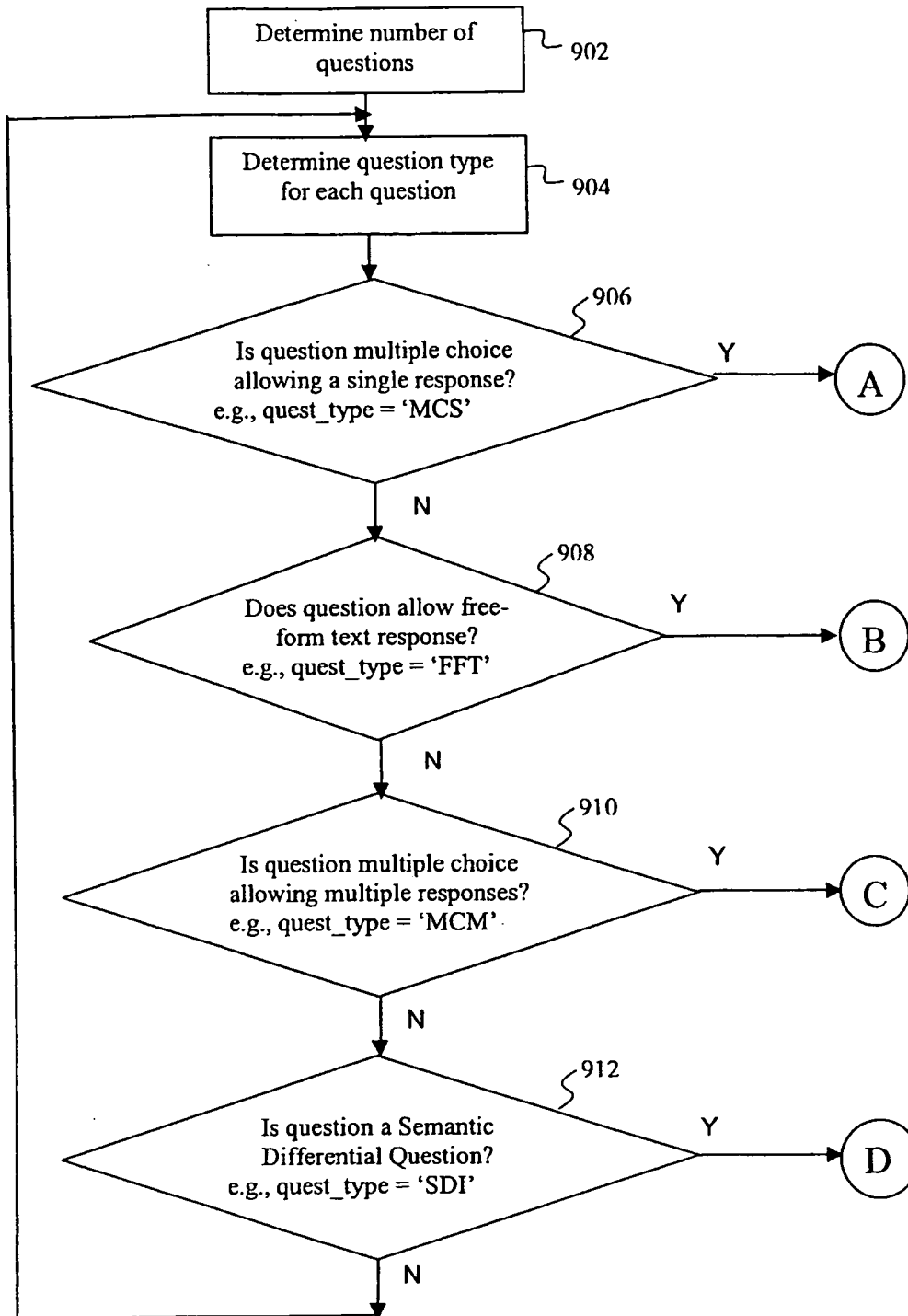


Figure 9A

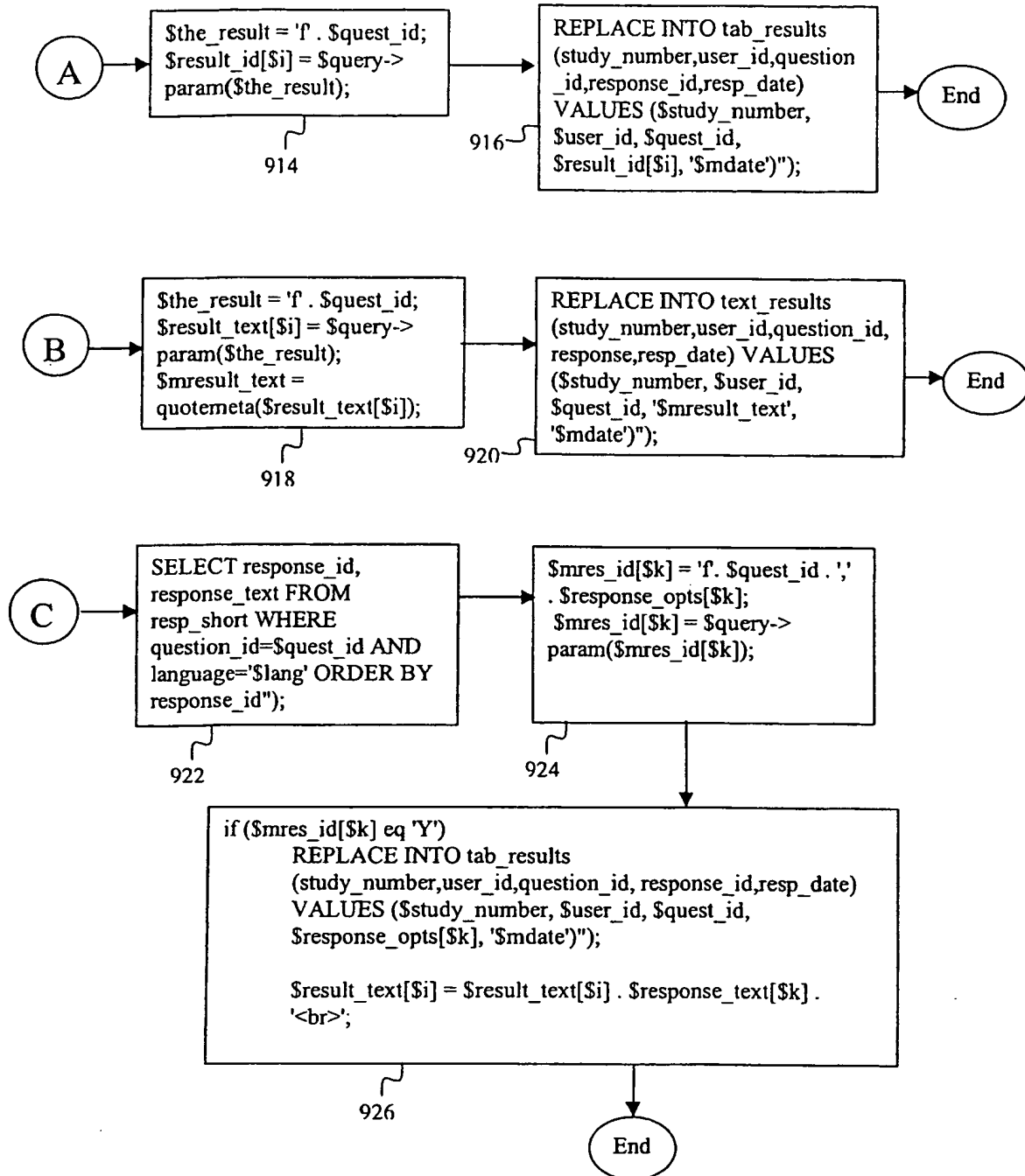


Figure 9B

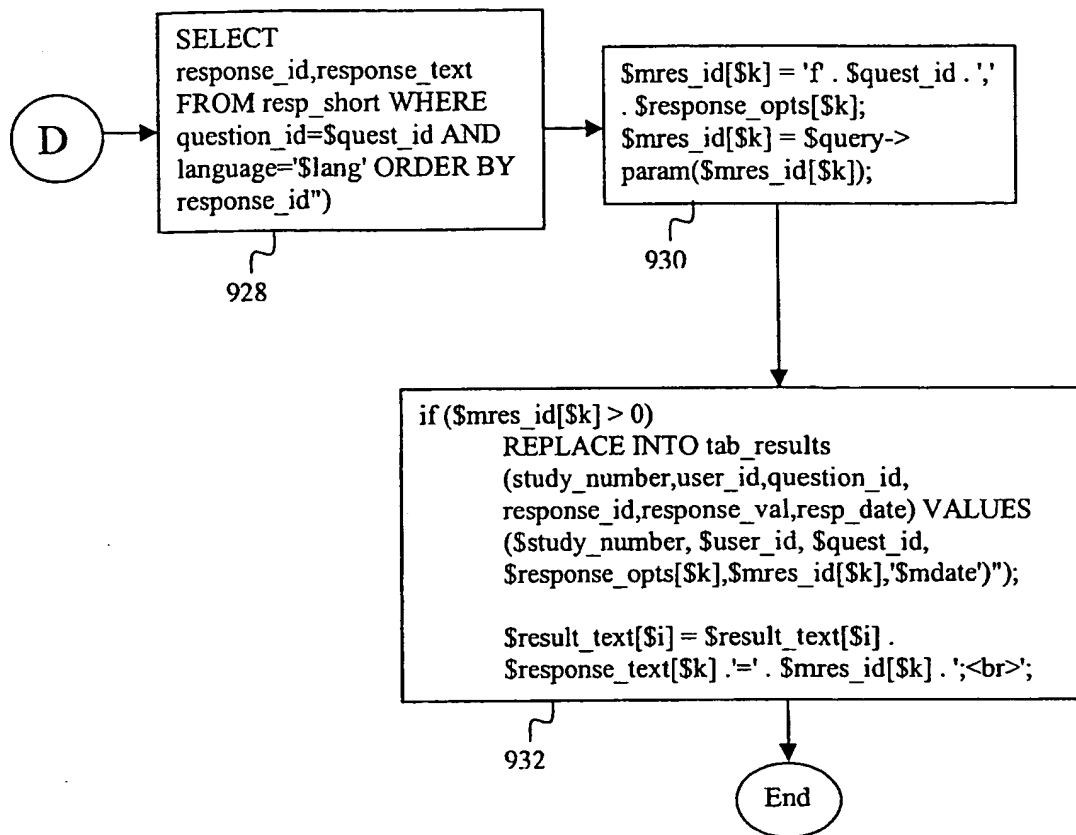
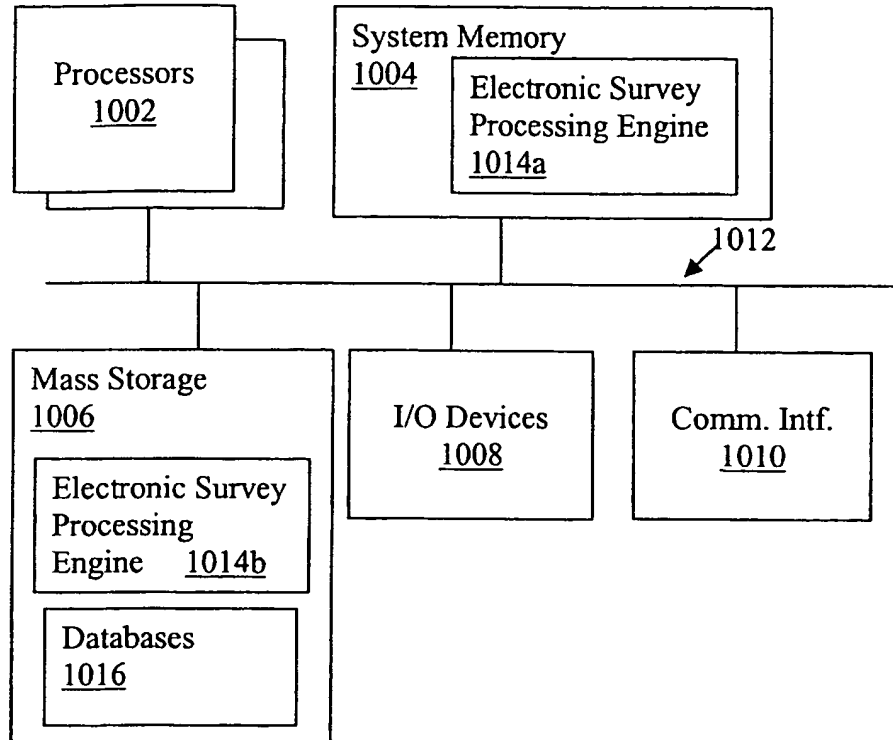
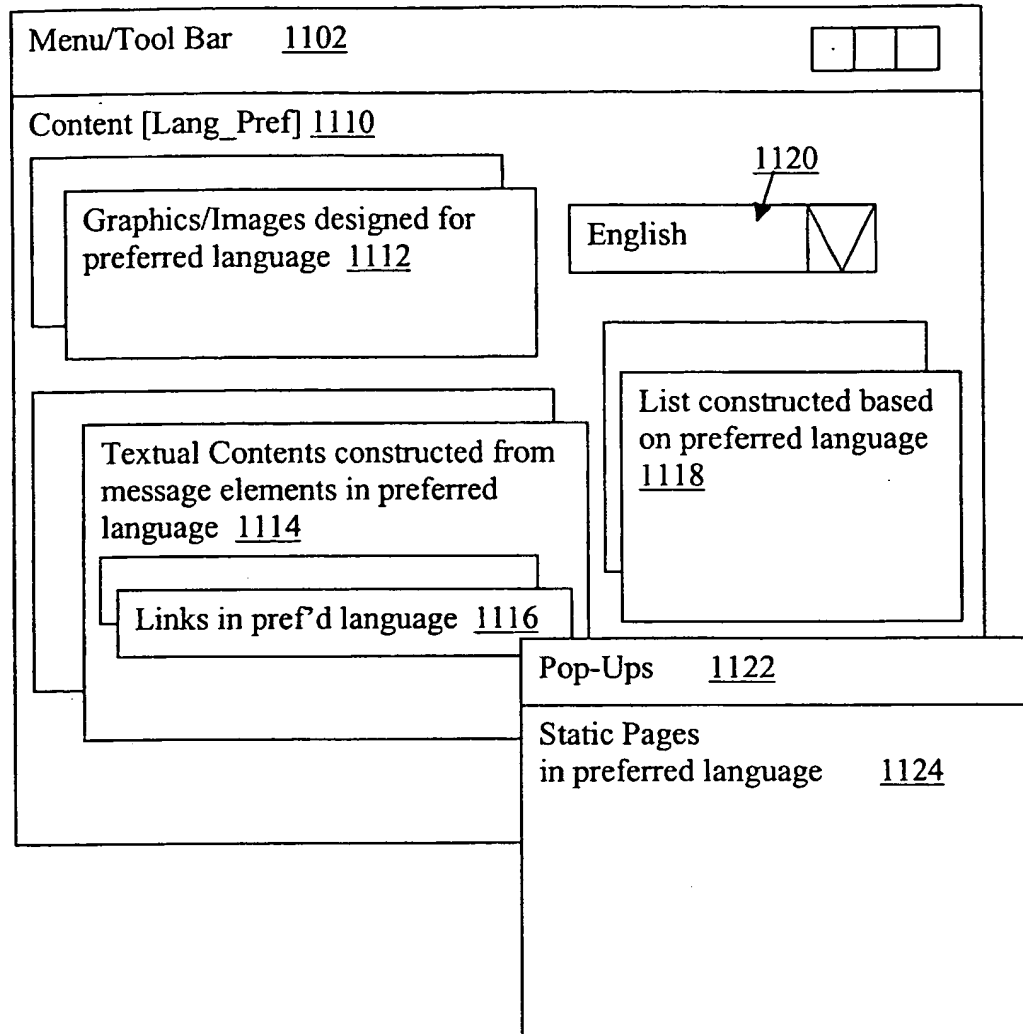


Figure 9C

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1000**Figure 10**

1100**Figure 11**

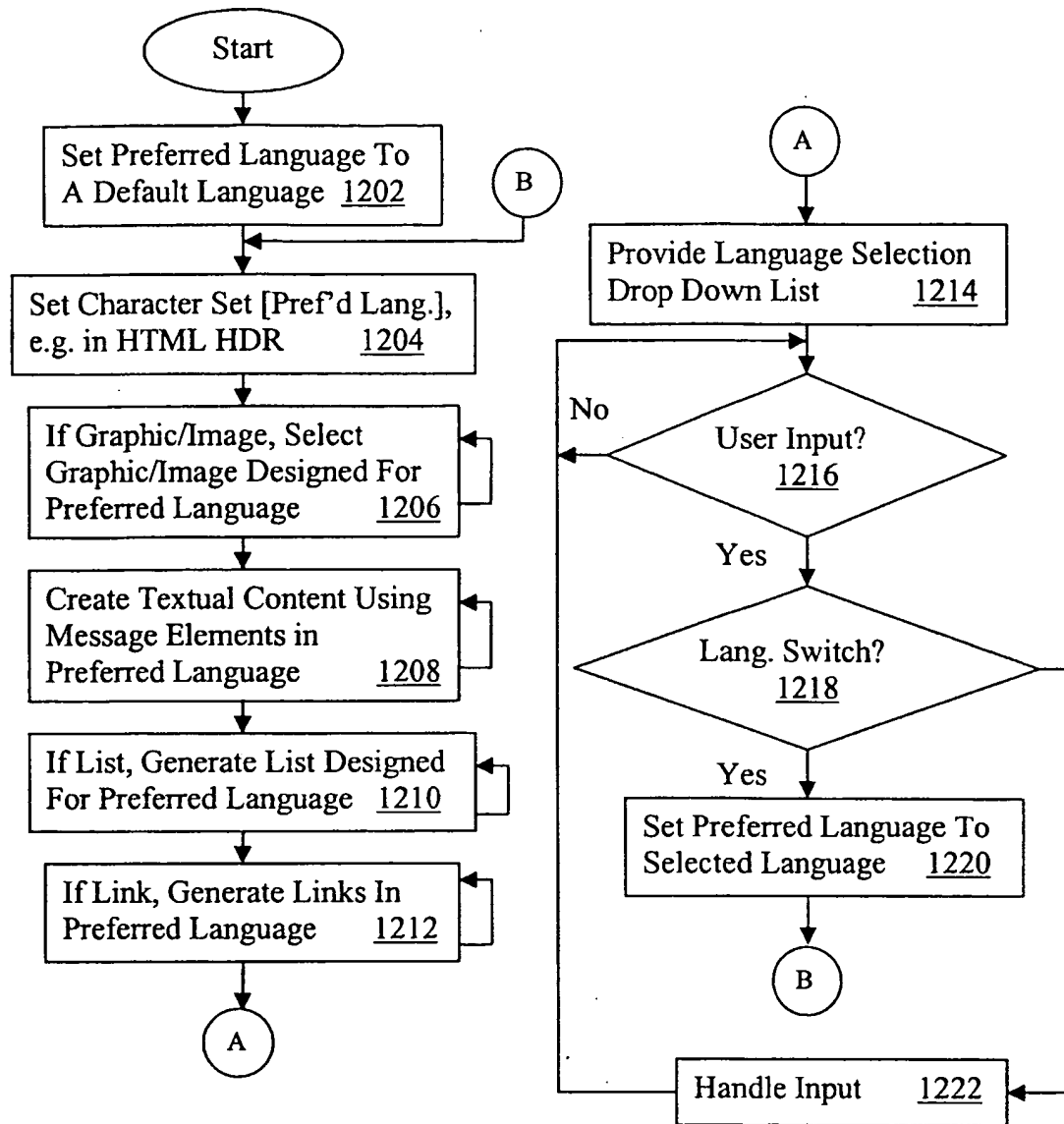


Figure 12

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PLEASE SPECIFY YOUR SELECTION CRITERIA AND YOUR ACCESS INFORMATION BELOW			
<div>Panelist Identity 1302</div> <div><div>Starting From: Ending With: Most Recent:</div><div><div>New Panelists Only: Panelist Last Name: Email Address:</div></div></div>			
<div>Countries, Languages & Panelist Interests 1304</div> <div><div><div>Afghanistan Albania Algeria American Samoa Andorra Angola</div><div>Afrikaans Arabic Bulgarian Chinese (Modern) Chinese (Trad.) Croatian</div><div>Advertising Alcoholic Drinks Appliances Audio Equipment Automotive Baby Care</div></div></div>			
<div>Additional Preferences 1306</div> <div><div>What is the minimum age to be included in the panelists search?</div><div>Should panelists matching the query criteria be selected by default?</div></div>			
<div>Account: Password: <input type="button" value="SUBMIT"/></div>			

Figure 13

1404

Ctry	Zip Code	Panelist Name	Lang.	Acct.	Email	Points	Refs	Surveys	Edu	Age	Ref. by	Q.	Select
US	98387	Koski, Stan	E	17090	abc@1.com	0	0	0 / 1	L2	21		<input type="checkbox"/>	<input type="checkbox"/>
US	99328	Jones, Judy	E	16229	xyz@2.com	250	10	2 / 2	L3	55		<input type="checkbox"/>	<input type="checkbox"/>
US	99645	Gardner, Gay	E	16578	xzz@3.com	200	0	1 / 2	L4	43	16563	C <input type="checkbox"/>	<input type="checkbox"/>

1402

1402

1402

Message Code to Send Study to Assign

CONTINUE

Figure 14

Contact: 14706	State:	<input type="text"/>
	Country:	<input type="text"/>
	E-Mail:	<input type="text"/>
	Phone:	<input type="text"/>
	Service:	<input type="text"/>
	Household Comp.	Ages 0-25 <input type="checkbox"/> Ages 25-50 <input type="checkbox"/> Ages 50+ <input type="checkbox"/>
	Education:	<input type="text"/>
	Marital Status:	<input type="text"/>
	Employment:	<input type="text"/>
	Language:	<input type="text"/>
	Quality of Data:	<input type="text"/>
	Password:	<input type="text"/>
	Birthday:	<input type="text"/> <input type="text"/> <input type="text"/>
	Registered:	
	Studies:	<div> <p><u>Study 50: Invited on 1999-10-22: Completed on ,</u> <u>Price point was 0.00</u></p> <p><u>Study 395: Invited on 1999-10-12: Completed on</u> <u>1999-10-13 15:55:18, Price point was 145.00</u></p> </div>

Figure 15